Building Owners and Managers Association (BOMA) INTERROGATORY #001

Reference:

Exhibit A, Tab 3, Schedule 1, Page 9

Interrogatory:

Please explain how the Load, described as "twelve month average peak in MW" is calculated.

Response:

For the year 2015, 12 monthly peak values were summed and divided by 12 to establish the 12-month average peak. For the bridge and test years, the forecast growth rate was applied to the 12-month average peak for 2015.

Witness: Bijan Alagheband

Building Owners and Managers Association (BOMA) INTERROGATORY #002

Reference:

Exhibit A, Tab 3, Schedule 1, Page 9

Interrogatory:

Please explain how the "forecast base year" was established.

Response:

The forecast base year refers to the last year for which Hydro One has full actual data. In the current case, 2015 is the forecast base year.

Witness: Bijan Alagheband

Building Owners and Managers Association (BOMA) INTERROGATORY #003

Reference:

Exhibit A, Tab 3, Schedule 1, Page 10

Interrogatory:

Please confirm:

(a) that Hydro One Networks Inc. ("HONI") is only seeking approval of the capital expenditures for 2017 and 2018 in this application. It is not seeking approval for capital expenditures referred to in the five year transmission plan;

(b) that approval of such expenditures will be sought in its next rate application; and

(c) to what extent do the proposed 2017 and 2018 sustainment investments represent the completion of projects begun in 2016 or 2015, for example, integrated refurbishment of a station? For each of the 2017 projects, please indicate the extent to which the project completes a project begun in 2016 or 2015, which, if not done would render the 2016 project investment worthless, or of severely diminished value, or would substantially increase the cost of doing the total project.

Please provide a sufficient project description to demonstrate in each case that it is one project done over two years, rather than separate projects.

Response:

(a) HONI is seeking approval for its revenue requirement for 2017 and 2018 only. To meet the applicable filing requirements, HONI provided a five-year capital forecast in its application.

(b) HONI will seek approval for its revenue requirement for the years 2019 and beyond in a subsequent rate application.

(c) A total of approximately $213.5 million or 14.3% of the total combined Sustainment capital in 2017 and 2018 is associated with the completion of projects commenced in 2016 or 2015. All of the 2017 projects, if not completed, would severely diminish the value of these investments, resulting in considerable write-offs due to project execution costs incurred to date. Hydro One does not have the additional detail requested on hand and cannot provide this information within the timeframe prescribed.

Building Owners and Managers Association (BOMA) INTERROGATORY #004

Reference:

Exhibit A, Tab 3, Schedule 1, Page 13, Table 5

Interrogatory:

Please back out separately the AFUDC for each year and each type of capital expenditure.

Response:

Please see the summary table of capital expenditures which excludes AFUDC for each year and each type:

Table 5: Summary of Transmission Capital Budget ($ Millions)

Excluding AFUDC	Historic				Bridge Year	Test Years		Forecast		
Description	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**
Sustaining	369.2	458.0	598.5	667.1	699.0	746.2	807.8	786.5	872.8	1,075.8
Development	312.4	163.8	126.8	159.5	155.5	182.8	157.9	233.6	243.3	246.4
Operations	14.4	16.9	27.4	15.0	29.8	24.9	30.0	57.8	19.8	23.1
Common Corporate Costs Capital	39.9	46.8	61.1	64.5	82.5	75.9	76.9	75.3	74.9	72.2
Total	**736.0**	**685.5**	**813.6**	**906.0**	**966.7**	**1,029.7**	**1,072.5**	**1,153.1**	**1,210.9**	**1,417.5**

Building Owners and Managers Association (BOMA) INTERROGATORY #005

Reference:

Exhibit A, Tab 3, Schedule 1, Page 17

Interrogatory:

(a) Please provide the NERC/NPCC documents (or a link to them) that specify reliability standards, and define what constitute high impact compliance violations and medium impact compliance violations.

(b) Please provide, for the last four years, the number of each type of compliance violation HONI has experienced, what penalties, if any, have been imposed, and what measures it has taken to ensure future compliance.

(c) Please discuss the extent to which the IESO has a role in the enforcement of the new NERC/NPCC standards. Does HONI deal directly with NERC/NPCC, or through the IESO? Please discus.

Response:

(a) Hydro One must comply with 56 NERC Reliability Standards and 4 NPCC Directories (approximately 556 requirements). The set of NERC Reliability Standards can be found at http://www.nerc.com/pa/Stand/Reliability%20Standards%20Complete%20Set/RSCompleteSet.pdf. The set of NPCC Directories can be found at https://www.npcc.org/Standards/Directories/Forms/Public%20List.aspx. Each requirement of Reliability Standard has an associated Violation Risk Factor (VRF) and a Violation Severity Level (VSL). The VRF and VSL matrix can be found here (http://www.nerc.com/files/Violation_Risk_Factors.pdf) see link on left hand side toolbar under "Reliability Standards". The guidelines for determining a VRF, which is an input in defining the impact of a compliance violation, can be found at http://www.nerc.com/files/Violation_Risk_Factors.pdf.
The guidelines for determining VSLs are shown in the table below and detailed criteria can be found at http://www.nerc.com/files/VSL_Guidelines_20090817.pdf.

Witness: Mike Penstone

Lower VSL	Moderate VSL	High VSL	Severe VSL
The performance or product measured almost meets the full intent of the requirement.	The performance or product measured meets the majority of the intent of the requirement.	The performance or product measured does not meet the majority of the intent of the requirement, but does meet some of the intent.	The performance or product measured does not substantively meet the intent of the requirement.

(b) The following table provides a summary of the types of NERC/NPCC reliability standards violations submitted by Hydro One between 2012 to August 12, 2016. The "Not Available" violations pertain to violations to NPCC Directories, which do not have a VRF or VSL assigned to them. No penalties have been imposed on these violations.

Violation Types	Count
High	11
Medium	18
Low	10
Not available	4
Total	43

The mitigation plan submitted to the IESO for each violation addresses the gaps and remedial actions to prevent future occurrences.

(c) The IESO's Market Assessment and Compliance Division (MACD) monitors the operation of Ontario's electricity market and fosters compliance with the Ontario market rules and North American Reliability Standards. MACD administers Ontario's Reliability Compliance Program that monitors and enforces compliance obligations of market participants.

For matters related to Compliance Enforcement, Hydro One has no obligations to and does not discuss compliance matters with either NERC or NPCC.

Building Owners and Managers Association (BOMA) INTERROGATORY #006

Reference:

Exhibit A, Tab 5, Schedule 1, Page 2

Interrogatory:

Please provide a copy of the Governance Agreement dated November 5, 2015 between HONI and the Province of Ontario, its majority shareholder.

Response:

Please see the attachment to this response. For clarity, the Governance Agreement is between Hydro One Limited and the Province of Ontario.

HYDRO ONE LIMITED

GOVERNANCE AGREEMENT

Dated as of November 5, 2015

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GOVERNANCE AGREEMENT

THIS AGREEMENT is made as of the 5th day of November, 2015

B E T W E E N:

HYDRO ONE LIMITED a corporation incorporated under the laws of the Province of Ontario

("**Hydro One**")

– and –

HER MAJESTY THE QUEEN IN RIGHT OF ONTARIO

(the "**Province**"), as represented by the Minister of Energy

RECITALS:

A. The Province has determined that in order to strengthen the long-term performance of Hydro One and generate value for Ontarians it is desirable to broaden the ownership of Hydro One pursuant to the Offering.

B. The Province and Hydro One wish to establish the governance structure for Hydro One given the Province's position as a significant and responsible shareholder of Hydro One.

C. In the Prospectus, the Province has stated that it intends to sell additional common shares of Hydro One over time. Pursuant to the *Electricity Act, 1998* (Ontario), the Minister of Energy on behalf of the Province has the authority to dispose of its interest in Hydro One and enter into any agreement the Minister considers necessary or incidental to the disposition of any such interest. However, under the *Electricity Act, 1998* (Ontario) (i) the Province is not permitted to sell Voting Securities if as a result the Province would own less than 40% of any class or series of Voting Securities and (ii) if as a result of the issuance of additional Voting Securities by Hydro One, the Province owns less than 40 per cent of the outstanding number of Voting Securities of any class or series, the Province is required to take steps to increase its ownership (subject to the Lieutenant Governor in Council determining the manner by which, and the time by or within which, the Voting Securities shall be acquired) to not less than 40 per cent of the outstanding number of Voting Securities of that class or series, in accordance with the provisions of that statute.

D. Given the Province's stated intention about future sales by it of common shares of Hydro One, the Province is prepared to commit not to acquire previously issued Voting Securities in the future if the Province would, after that acquisition, own more than 45% of any class or series of Voting Securities.

E. Given the Province's ownership obligations with respect to Voting Securities in accordance with the *Electricity Act, 1998* (Ontario), Hydro One is prepared to provide the

Province with a pre-emptive right to acquire up to 45% of certain new issuances of Voting Securities by Hydro One.

F. Hydro One and the Province wish to enter into this Agreement to give effect to the matters set out in the Recitals and to govern the Province's relationship with Hydro One in its capacity as a holder of Voting Securities.

In consideration of the mutual covenants and agreements contained in this Agreement and other good and valuable consideration (the receipt and sufficiency of which are hereby acknowledged by each of the Parties), the Parties agree as follows.

ARTICLE 1
INTERPRETATION

1.1 Definitions

In this Agreement:

1.1.1 "**Ad Hoc Nominating Committee**" has the meaning given to that term in Section 4.7.2;

1.1.2 "**Agreement**" means this Governance Agreement and all Schedules attached to this agreement, in each case as they may be amended, supplemented or replaced from time to time in accordance with this Agreement;

1.1.3 "**Annual Confirmation Meeting**" means the first meeting of Directors after each annual meeting of Shareholders;

1.1.4 "**Arbitration Rules**" has the meaning given to that term in Section 7.1;

1.1.5 "**Articles**" means the articles of incorporation of Hydro One, as amended from time to time;

1.1.6 "**Board**" means the board of directors of Hydro One;

1.1.7 "**Board Diversity Policy**" means the policy on board diversity approved by the Board and in effect on the date of this Agreement, as it may be amended from time to time in accordance with Section 2.4.2;

1.1.8 "**Business Day**" means any working day, Monday to Friday inclusive, but excluding statutory and other holidays, namely: New Year's Day; Family Day; Good Friday; Easter Monday; Victoria Day; Canada Day; Civic Holiday; Labour Day; Thanksgiving Day; Remembrance Day; Christmas Day; Boxing Day and any other day identified as a "holiday" under Section 88 of the *Legislation Act*, 2006 (Ontario);

1.1.9 "**Chair**" means the chair of the Board;

1.1.10 "**CEO**" means the Chief Executive Officer of Hydro One;

1.1.11 "**Circular Deadline**" has the meaning given to that term in Section 4.3.3;

1.1.12 "**Constating Documents**" means Hydro One's articles of incorporation, certificate of incorporation, by-laws, or similar organizational documents, as the same may be amended from time to time;

1.1.13 "**Contested Meeting**" means a meeting of Shareholders for the purposes of electing Directors where the number of candidates for election as a Director validly nominated exceeds the number of Directors to be elected at that meeting;

1.1.14 "**Director**" means a director of Hydro One;

1.1.15 "**DRIP**" means any dividend re-investment arrangement established by Hydro One from time to time that is on terms (including as to discount rate) consistent with dividend re-investment arrangements of other publicly-traded utilities in Canada and that does not include a cash purchase option.

1.1.16 "**EA**" means the *Electricity Act, 1998* (Ontario);

1.1.17 "**Effective Date**" means the date the Offering is completed;

1.1.18 "**Excluded Issuance**" means the issuance of Voting Securities: (i) pursuant to employee or director compensation plans existing on the date hereof or plans adopted after the date hereof that comply with the rules of the TSX and, if required, have been approved by the TSX; (ii) pursuant to a DRIP; (iii) pursuant to a rights offering that is open to all Shareholders; or (iv) pursuant to any business combination, take-over bid, arrangement, asset purchase transaction or other acquisition of assets or securities of a third party;

1.1.19 "**Expected Departing Directors**" has the meaning given to that term in Section 4.3.1;

1.1.20 "**FAA**" means the *Financial Administration Act* (Ontario);

1.1.21 "**Governance Principles**" has the meaning given to that term in Section 2.1;

1.1.22 "**Governmental Authority**" means any federal, national, supranational, state, provincial or local government, any court, tribunal, arbitrator, authority, agency, commission, official, any Canadian or Provincial minister or the Crown or foreign equivalent or any non-governmental self-regulatory agency or other instrumentality of any government that, in each case, has jurisdiction over the matter in question;

1.1.23 "**Hydro One**" means Hydro One Limited;

1.1.24 "**Hydro One Entity**" means any Person controlled directly or indirectly by Hydro One where "control" has the meaning given to that term in the take-over bid rules under Ontario securities Laws;

1.1.25 “**Hydro One Ombudsman**” means the ombudsman for Hydro One appointed by the Board pursuant to Section 48.3 of the EA;

1.1.26 “**Hydro One’s Governance Standards**” has the meaning given to that term in Section 2.4.2;

1.1.27 “**Law**” means all laws, statutes, rules, regulations, ordinances, judgments, orders, writs, directives, decisions, rulings, decrees, awards and other pronouncements having the effect of law in Canada or in Ontario, or, as applicable, any foreign country or any other domestic or any foreign province, state, county, city or other political subdivision or of any Governmental Authority;

1.1.28 “**Majority Voting Policy**” means the majority voting policy of Hydro One approved by the Board and in effect on the date of this Agreement, as it may be amended from time to time in accordance with Sections 2.4.1 and 2.4.2;

1.1.29 “**material information**” means a “material fact” or a “material change” (as each of those terms is defined under applicable securities Laws);

1.1.30 “**Nominating and Governance Committee**” has the meaning given to that term in Section 3.5;

1.1.31 “**Nomination Deadline**” has the meaning given to that term in Section 4.3.3;

1.1.32 “**Nomination Notice**” has the meaning given to that term in Section 4.3.3;

1.1.33 “**OBCA**” means the *Business Corporations Act* (Ontario);

1.1.34 “**OEB**” means the Ontario Energy Board continued as a non-share capital corporation under the OEB Act;

1.1.35 “**OEB Act**” means the *Ontario Energy Board Act, 1998* (Ontario);

1.1.36 “**Offer**” has the meaning given to that term in Section 6.1;

1.1.37 “**Offered Securities**” has the meaning given to that term in Section 6.1;

1.1.38 “**Offering**” means the initial public offering of common shares of Hydro One described in the Prospectus;

1.1.39 “**Offering Outside Date**” has the meaning given to that term in Section 6.2;

1.1.40 “**Official or Employee of the Province**” has the meaning given to that term in Schedule “A” to this Agreement;

1.1.41 "**Ordinary Board Resolution**" means a resolution of the Board passed by at least a majority of the votes cast at a meeting of the Directors, or consented to in writing by all of the Directors;

1.1.42 "**Party**" means a party to this Agreement and "**Parties**" means all of the parties to this Agreement;

1.1.43 "**Person**" means any individual, partnership, limited partnership, joint venture, syndicate, sole proprietorship, company or corporation with or without share capital, unincorporated association, Governmental Authority, trust, trustee, executor, administrator, or other legal personal representative;

1.1.44 "**Proposed Offering**" has the meaning given to that term in Section 6.1;

1.1.45 "**Prospectus**" means the prospectus of Hydro One dated October 29, 2015;

1.1.46 "**Province**" has the meaning given to that term in the Recitals;

1.1.47 "**Provincial Nominee**" means any Director nominated by the Province to serve as a Director pursuant to the terms of this Agreement who has been duly elected or appointed to the Board;

1.1.48 "**Provincial Representative**" means the Minister of Energy or any other Person(s) designated from time to time in accordance with Section 8.9 by the Minister of Energy as representing the Province for the particular matter or matters under this Agreement stated in the relevant designation, provided that the Minister of Energy may designate no more than one Person for a particular matter;

1.1.49 "**Public Accounts**" has the same meaning as that term has when used in the FAA;

1.1.50 "**Public Entity**" has the meaning given to the term "public entity" in the FAA;

1.1.51 "**Recitals**" means the recitals to this Agreement;

1.1.52 "**Registration Rights Agreement**" means the registration rights agreement dated the date of this Agreement between the Province and Hydro One;

1.1.53 "**Removal Meeting**" has the meaning given to that term in Section 4.7.1;

1.1.54 "**Removal Notice**" has the meaning given to that term in Section 4.7.1;

1.1.55 "**Response**" has the meaning given to that term in Section 6.2;

1.1.56 "**Shareholder**" means a holder of Voting Securities;

1.1.57 "**Skills Matrix**" means the matrix of expertise, skills, experience and perspectives applied in recruiting and retaining Directors with a balance of expertise, skills, experience and perspectives, taking into consideration Hydro One's mandate, risk profile, operations and ownership structure, approved by the Board and in effect on the date of this Agreement, as it may be amended from time to time in accordance with Section 2.4.2;

1.1.58 "**Specified Provincial Entities**" means each organization referred to in Sections 6 and 7 of Schedule "A" to this Agreement.

1.1.59 "**Special Board Resolution**" means a resolution of the Board passed by at least two-thirds of the votes cast at a meeting of the Directors, or consented to in writing by all of the Directors;

1.1.60 "**TSX**" means Toronto Stock Exchange;

1.1.61 "**Voting Security**" means a voting security of Hydro One where "voting security" has the meaning given to the term "voting security" in the EA; and

1.1.62 "**Voting Security Threshold**" has the meaning given to that term in Section 4.8.1.

1.2 Schedules

The following schedules are attached to this Agreement:

Schedule "A"	–	Official or Employee of the Province
Schedule "B"	–	Form of Confidentiality Agreement
Schedule "C"	–	Hydro One's Governance Standards
Schedule "D"	–	Rules of Procedure for Arbitration

1.3 Interpretation

Unless otherwise expressly provided in this Agreement or the context requires a different interpretation, the following rules of interpretation shall apply:

1.3.1 The table of contents and headings and references to them set forth in this Agreement are for convenience of reference purposes only, do not constitute a part of this Agreement and do not affect and are not intended to affect in any way the meaning or interpretation of this Agreement or any term or provision hereof.

1.3.2 All references in this Agreement to Sections, Articles, or Schedules, shall be deemed to refer to Sections, Articles or Schedules of this Agreement, as applicable.

1.3.3 All references in this Agreement to specific Sections, Articles, Schedules, and other divisions of this Agreement followed by a number are references to the whole of the Section, Article, Schedule or other division of this Agreement, as applicable, bearing that number, including all subsidiary provisions containing that same number as a prefix.

1.3.4 The Schedules to this Agreement are an integral part of this Agreement and a reference to this Agreement includes a reference to the Schedules.

1.3.5 Any reference in this Agreement to each of the masculine, feminine and neuter genders shall be deemed to include all other genders.

1.3.6 Any reference to the singular in this Agreement shall also include the plural and vice versa, as the context may require.

1.3.7 References in this Agreement to any Party or other Person (other than a Provincial Representative) shall include references to its respective successors resulting from any amalgamation, merger, arrangement or other reorganization of such Party or other Person.

1.3.8 All amounts in this Agreement are stated and are to be paid in Canadian currency.

1.3.9 Unless specified otherwise, reference in this Agreement to a statute or statutory provision refers to that statute or statutory provision as it may be amended, replaced or re-enacted from time to time, or to any restated or successor statute or statutory provision of comparable effect. A reference in this Agreement to a statute includes a reference to all rules, regulations, by-laws and other instruments made under that statute.

1.3.10 Any reference to a number of days shall refer to calendar days unless Business Days are specified.

1.3.11 In construing this Agreement, the rule known as the *ejusdem generis* rule shall not apply nor shall any similar rule or approach apply to the construction of this Agreement and, accordingly, general words introduced or followed by the word "other" or "including" or "in particular" shall not be given a restrictive meaning because they are followed or preceded (as the case may be) by particular examples intended to fall within the meaning of the general words.

1.3.12 Where this Agreement states that an obligation shall be performed "no later than" or "within" or "by" a prescribed number of days before a stipulated date or event or "by" a date which is a prescribed number of days before a stipulated date or event, the latest time for performance shall be 5:00 p.m. on the last day for performance of the obligation concerned, or if that day is not a Business Day, 5:00 p.m. on the next Business Day.

1.3.13 Where this Agreement states that an obligation shall be performed "on" a stipulated date, the latest time for performance shall be 5:00 p.m. on that day, or, if that day is not a Business Day, 5:00 p.m. on the next Business Day.

1.3.14 Any reference to time of day or date means the local time or date in Toronto, Ontario unless otherwise specified.

1.3.15 References containing terms such as:

(a) "hereof", "herein", "hereto", "hereinafter", "hereunder" and other terms of like import are not limited in applicability to the specific provision within which such references are set forth but instead refer to this Agreement taken as a whole;

(b) "include", "includes" and "including", whether or not used with the words "without limitation" or "but not limited to", shall not be deemed limited by the specific enumeration of items but shall, in all cases, be deemed to be without limitation and construed and interpreted to mean "include without limitation", "includes without limitation" and "including without limitation"; and

(c) "in its sole discretion" shall be deemed to be "in its sole and absolute discretion".

1.3.16 Where an amount is to be determined under this Agreement by rounding to the nearest whole number, any half shall be rounded up to the next whole number.

1.3.17 Unless otherwise provided in this Agreement, any action to be taken by the Province, including the performance of any obligation or the exercise of any right, shall be undertaken by a Provincial Representative. Any action taken by a Provincial Representative shall bind the Province under this Agreement with respect to the matter or matters for which the Minister of Energy has designated that Provincial Representative at the relevant time and Hydro One shall be entitled to rely on any action taken by a Provincial Representative without any further enquiry into the Provincial Representative's authority to take the particular action.

ARTICLE 2
GOVERNANCE PRINCIPLES AND GOVERNANCE STANDARDS

2.1 Governance Principles

The business and affairs of Hydro One shall be managed and operated in accordance with the following principles (collectively, the "**Governance Principles**"):

2.1.1 Hydro One shall maintain, and act in accordance with, corporate governance policies, procedures and practices that are consistent with the best practices of leading Canadian publicly listed companies, having regard to Hydro One's ownership structure and this Agreement.

2.1.2 The Board shall be responsible for the management of or supervising the management of the business and affairs of Hydro One, including for those matters described in Section 2.3.

2.1.3 The Province shall, with respect to its ownership interest in Hydro One, engage in the business and affairs of Hydro One and the Hydro One Entities as an investor and not as a manager.

2.2 Interpretation of Governance Principles

2.2.1 For clarity, the Governance Principles:

(a) are fundamental to Hydro One and the Province entering into this Agreement, and compliance with the Governance Principles is essential to the management and operation of Hydro One;

(b) are obligations of Hydro One and the Province;

(c) are subject to applicable Laws and the other provisions of this Agreement; and

(d) do not restrict the Province in any way (i) in relation to the regulation of Hydro One or any Hydro One Entity, including by the OEB or other body appointed by or responsible to the Province, or (ii) in relation to system planning by the Independent Electricity System Operator, or (iii) in relation to the enforcement of Ontario Laws applicable to Hydro One or any Hydro One Entity or the enactment, promulgation or amendment of such Laws or (iv) in respect of any communication regarding Hydro One or any Hydro One Entity by an individual in his or her capacity as a member of the Legislative Assembly of Ontario, if made in the Legislative Assembly of Ontario or in another public forum in relation to the enforcement, promulgation or enactment of Ontario Laws or in relation to Ontario regulatory policy; and, for further clarity, communications by a member of the Legislative Assembly of Ontario who is not a member of the governing party at the relevant time are not communications by the Province.

2.2.2 With respect to its ownership interest in Hydro One, the Province intends to achieve its policy objectives through legislation and regulation as it would with respect to any other utility operating in Ontario. For clarity, neither the Governance Principles nor that intention restrict the exercise by the Province of its rights as a Shareholder, including its right to vote any Voting Securities in the sole interest and sole discretion of the Province, except as expressly provided for in this Agreement.

2.3 Role of the Board

Subject to applicable Law, including the OBCA, those matters for which the Board is responsible and in respect of which it has full authority (whether directly, by delegation or by supervision) include specifically:

(a) corporate governance;

(b) the appointment, termination, supervision and compensation of the CEO, Chief Financial Officer and other senior officers of Hydro One;

(c) remuneration of directors;

(d) strategic planning and direction;

(e) risk management;

(f) capital structure;

(g) dividend and distribution policy;

(h) financial management and reporting;

(i) approval of the annual business plan and budget of Hydro One;

(j) disclosure under applicable securities and other Laws and other public communication; and

(k) any other matter that from time to time ordinarily is supervised by the board of directors of a corporation with publicly traded securities.

2.4 Governance Standards

2.4.1 Hydro One shall maintain in effect at all times a majority voting policy in respect of the election of Directors that requires a Director nominee who receives a greater number of votes "withheld" than votes "for" at a meeting of Shareholders to elect Directors to tender his or her resignation to the Board promptly following the conclusion of that meeting. The parties acknowledge that the Majority Voting Policy in effect on the date of this Agreement satisfies this requirement. Hydro One may amend the Majority Voting Policy only in accordance with Section 2.4.2 and to the extent consistent with the requirements of majority voting policies required by the TSX or other applicable Laws, even where Hydro One is exempt from those requirements by reason of the Province's ownership interest and provided that the amended Majority Voting Policy complies with the first sentence of this Section 2.4.1 or will have substantially the same effect.

2.4.2 Hydro One has established the governance policies, procedures and practices listed in Schedule "C" attached to this Agreement (collectively, "**Hydro One's Governance Standards**"), which include the mandate for the Hydro One Ombudsman, the Skills Matrix, the Board Diversity Policy and the Majority Voting Policy. No amendment, supplement or addition to Hydro One's Governance Standards shall be effective unless approved by a Special Board Resolution, except to the extent required by any applicable Laws.

2.5 Restriction on Province Initiating a Fundamental Change

The Province shall not requisition a meeting of Shareholders to consider a fundamental change (as described in Part XIV of the OBCA) in respect of Hydro One. The Province may, however, at any meeting of Shareholders vote its Voting Securities in its sole interest and sole discretion on any proposal or resolution relating to such a proposed fundamental change.

2.6 Restriction on Province Acting Jointly or in Concert

The Province shall not act jointly or in concert with any Person in connection with the exercise by that other Person of that Person's rights as a Shareholder or take any steps, directly or indirectly, to solicit any other Person to exercise that Person's rights as a Shareholder in a manner if the Province would be prohibited under this Agreement from directly exercising its own rights as a Shareholder in that manner. For clarity, a Person's rights as a Shareholder include for this purpose the right to requisition a meeting of Shareholders, to nominate someone for election as a Director and to vote any Voting Securities, but nothing in this Section 2.6 shall restrict the Province from soliciting proxies to vote another Person's shares in a particular manner, if the Province would have been entitled to vote its own Voting Securities in that manner under this Agreement. For greater certainty, any pension plan or related pension fund which the Province or any Public Entity establishes, sponsors, administers or contributes to, whether in whole or in part and whether before or after the Effective Date, shall not be treated as a joint actor of the Province for purposes of this Section 2.6, except to the extent that the Province solicits the administering entity or governing body of the pension plan or related pension fund to take a particular action or step.

2.7 Acquisition by the Province of Additional Voting Securities

2.7.1 The Province shall not, directly or indirectly, acquire beneficial ownership or control or direction over previously issued Voting Securities if after the acquisition the Province would have beneficial ownership or exercise control or direction over greater than 45% of any class or series of Voting Securities. For clarity, the foregoing restriction does not require the Province to sell or otherwise dispose of any Voting Securities it owns on the Effective Date or that it acquires after that date in accordance with this Agreement nor does it restrict the Province from acquiring Voting Securities on an issuance by Hydro One pursuant to Article 6 or otherwise.

2.7.2 For purposes of Section 2.7.1, beneficial ownership of or control or direction over the following Voting Securities shall not be taken into account:

(a) Voting Securities acquired by the Province as a result of the enforcement by the Province of any security interest securing payment of debt obligations owing by third parties to the Province;

(b) Voting Securities acquired by Ontario Power Generation Inc. for the purposes of fulfilling obligations it may have under employee compensation arrangements to deliver Voting Securities to its employees; or

(c) Voting Securities acquired pursuant to the Ontario Nuclear Funds Agreement; and

(d) Voting Securities acquired by, on behalf of, or by the trustee for, the Ontario Retirement Pension Plan contemplated by the *Ontario Retirement Pension Plan Act*, 2015.

2.7.3 For clarity, for purposes of Section 2.7.1, the Province does not have beneficial ownership of or exercise control or direction over Voting Securities that are investments on behalf of the Province or a Public Entity:

(a) made by a third party investment manager with discretionary authority (subject to any retained discretion in order for the Province or the Public Entity to fulfil its fiduciary duties);

(b) made by an investment fund or other pooled investment vehicle in which the Province or a Public Entity has directly or indirectly invested and which is managed by a third party investment manager; or

(c) made as a passive investment,

and in each case made under a bona fide investment program and independently of, and not coordinated with, the Province's policy objectives relating to its ownership of Voting Securities pursuant to the EA.

2.8 TSX Listing

Hydro One shall maintain a listing of its common shares on the TSX, subject to continuing to meet the listing requirements of the TSX.

2.9 Obligations of Hydro One

Any obligations of the Board, the Nominating and Governance Committee, the Chair or any other representative of Hydro One provided for in this Agreement are deemed to be obligations of Hydro One and Hydro One shall ensure those obligations are complied with.

2.10 Governance of Subsidiaries

2.10.1 Subject to applicable Laws, the board of directors of each of Hydro One Inc. and Hydro One Networks Inc. shall be constituted to have the same members as the Board unless the Board determines otherwise.

2.10.2 Hydro One shall cause each of its wholly-owned Hydro One Entities, and shall use all commercially reasonable efforts to cause each of its other Hydro One Entities, to manage and operate its business and affairs on a basis that permits Hydro One to comply with its obligations under Sections 2.1.1 and 2.1.2.

2.10.3 Hydro One shall use its best efforts to cause each of its wholly-owned Hydro One Entities, and shall use all commercially reasonable efforts to cause each of its other Hydro One Entities, to manage its business and affairs on a basis that facilitates and is consistent with the Province complying with its obligations under Section 2.1.3.

2.10.4 Hydro One shall cause each of its wholly-owned Hydro One Entities to, and shall use all commercially reasonable efforts to cause each of its other Hydro One Entities to, comply with their respective obligations under the EA and the OEB Act.

2.11 By-Laws

2.11.1 If Hydro One cannot perform its obligations under or comply with this Agreement without being in breach of the by-laws of Hydro One, then Hydro One shall, as soon as reasonably practical after determining that is the case and to the extent permitted by applicable Law:

(a) amend the by-laws to permit Hydro One to perform its obligations under and comply with the terms of this Agreement without breaching the by-laws; and

(b) submit the amendment to the Shareholders for approval at the next meeting of Shareholders.

2.11.2 To the extent that the requirements of this Agreement are in addition to or more onerous than the requirements of the by-laws of Hydro One, but do not otherwise require Hydro One to amend its by-laws in accordance with Section 2.11.1, Hydro One shall comply with the terms of this Agreement as well as the by-laws.

ARTICLE 3
GOVERNANCE STRUCTURE

3.1 Number of Directors

3.1.1 The number of Directors shall be a minimum of 10 and a maximum of 15. Hydro One’s Articles shall at all times provide for this minimum and maximum number of Directors.

3.1.2 Until the first annual meeting of Shareholders after the date of this Agreement, the number of Directors of Hydro One shall be 15.

3.1.3 The number of Directors to be elected at the first and each subsequent annual meeting of Shareholders after the date of this Agreement shall be the number of Directors determined from time to time by the Board, subject to Section 3.1.1, the Articles and the OBCA.

3.1.4 If the Board increases the number of Directors between annual meetings of the Shareholders, any vacancies created by the increase shall be filled in accordance with Section 4.4.

3.2 Appointment of Chair

3.2.1 The appointment of a new Chair at any time must be approved by a Special Board Resolution.

3.2.2 The Chair shall be nominated and confirmed annually by a Special Board Resolution at the Annual Confirmation Meeting. If the Board does not confirm the Chair at the Annual Confirmation Meeting by a Special Board Resolution, the Board shall remove the Chair as soon as practicable and appoint a replacement Chair in accordance with this Section 3.2.

3.2.3 The Chair must be a Director.

3.2.4 The CEO shall not be the Chair.

3.2.5 The Parties acknowledge and confirm that the current Chair, as set forth in the Prospectus, has been nominated and confirmed as required by this Section 3.2 until the next Annual Confirmation Meeting.

3.2.6 Nothing in this Section 3.2 limits the ability of the Board, by Ordinary Board Resolution, to remove the Chair between Annual Confirmation Meetings.

3.3 Appointment of CEO

3.3.1 The appointment of a new CEO at any time must be approved by a Special Board Resolution.

3.3.2 The CEO must be confirmed annually by a Special Board Resolution at the Annual Confirmation Meeting. If the Board does not confirm the CEO at the Annual Confirmation Meeting by a Special Board Resolution, the Board shall remove the CEO as soon as practicable and appoint a replacement CEO in accordance with this Section 3.3.

3.3.3 Hydro One shall ensure that it is a term of the CEO’s employment arrangements that she or he shall resign as a Director at such time that she or he ceases to be CEO.

3.3.4 The Parties acknowledge and confirm that the current CEO, as set forth in the Prospectus, has been appointed and confirmed as required by this Section 3.3 until the next Annual Confirmation Meeting.

3.3.5 Nothing in this Section 3.3 limits the ability of the Board, by Ordinary Board Resolution, to remove the CEO between Annual Confirmation Meetings.

3.4 Advance Notice for Special Board Resolution

Notwithstanding anything to the contrary in the by-laws of Hydro One, Hydro One shall notify the Directors not less than 10 days in advance of a meeting at which a resolution is to be considered that must be approved by Special Board Resolution, provided that (i) the foregoing notice requirement does not apply to confirmation of the Chair and CEO at the Annual Confirmation Meeting, and (ii) a Director may in any manner waive notice, provided that his or her attendance at a meeting shall be treated as a waiver of any notice of that meeting required by this Section 3.4 except where such Director attends the meeting for the express purpose of objecting to the transaction of any business on the grounds that the meeting was not lawfully called. Hydro One shall include in the notice a copy of the proposed resolution and details regarding the matter to be considered for approval.

3.5 Nominating and Governance Committee

The Board shall maintain a committee (the "**Nominating and Governance Committee**") that has the responsibilities and obligations contemplated by this Agreement to be responsibilities and obligations of the Nominating and Governance Committee. All references in this Agreement to the Nominating and Governance Committee shall mean whichever committee has those responsibilities and obligations at the relevant time, regardless of what other responsibilities and obligations that committee may have and regardless of the name or designation of that committee in the Hydro One Governance Standards. For clarity, initially the Nominating and Governance Committee is designated in Hydro One's Governance Standards as the "Nominating, Corporate Governance, Public Policy & Regulatory Committee".

ARTICLE 4
ELECTION AND APPOINTMENT OF DIRECTORS

4.1 Nomination of Directors

4.1.1 Subject to Section 4.7, at any meeting of Shareholders at which Directors are to be elected, Hydro One shall propose nominees for election as Directors as follows:

(a) The CEO shall be nominated.

(b) Subject to Section 4.8, the Province shall be entitled to nominate the number of nominees that is equal to 40% of the number of Directors to be elected (rounded to the nearest whole number). Each nominee of the Province must meet the qualifications set out in Section 4.2 and any Director nominee of the Province must be confirmed in accordance with Section 4.3, as applicable.

(c) The Directors not nominated pursuant to Section 4.1.1(a) or 4.1.1(b) shall be nominated by the Nominating and Governance Committee. Each nominee of the Nominating and Governance Committee must meet the qualifications set out in Section 4.2 and any Director nominee of the Nominating and Governance Committee must be confirmed in accordance with Section 4.3, as applicable.

4.1.2 In respect of any meeting of Shareholders at which Directors are to be elected, Hydro One shall take all actions necessary and advisable to ensure that (i) proxies are solicited by or on behalf of Hydro One in favour of the election of the Director nominees nominated in accordance with Section 4.1.1 and (ii) every such nominee is endorsed and recommended in the applicable management information circular and other proxy solicitation materials provided by or on behalf of Hydro One to Shareholders. Hydro One shall take all other commercially reasonable actions necessary to permit the election or appointment to the Board of such nominees.

4.1.3 Subject to Sections 4.5, 4.6.1 and 4.7.6, in respect of any meeting of Shareholders at which Directors are to be elected, the Province shall vote in favour of the Director nominees nominated in accordance with Section 4.1.1.

4.2 Qualification of Director Nominees

4.2.1 Each Director nominee must be an individual of high quality and integrity who has:

(a) significant experience and expertise in business or that is applicable to business,

(b) served in a senior executive or leadership position,

(c) broad exposure to and understanding of the Canadian or international business community,

(d) skills for directing the management of a company, and

(e) motivation and availability,

in each case to the extent requisite for a business of the complexity, size and scale of the business of Hydro One and on a basis consistent with the highest standards for directors of leading Canadian publicly listed companies.

4.2.2 Other than the CEO, each Director nominee shall be independent of Hydro One within the meaning of Ontario securities Laws governing the disclosure of corporate governance practices.

4.2.3 Other than the CEO, each Director nominee (including, for clarity, a nominee of the Province), shall be independent of the Province. For these purposes, a Director nominee shall be independent of the Province if:

(a) he or she is independent of Hydro One within the meaning of Ontario securities Laws governing the disclosure of corporate governance practices, where the Province and each Specified Provincial Entity is deemed to be a "parent" of Hydro One under that definition but excluding, in the case only of the Directors named in the Prospectus, any prior relationship referred to in those Ontario securities Laws where the relationship ended before August 31, 2015;

(b) he or she is not a current Official or Employee of the Province; and

(c) he or she has not been an Official or Employee of the Province for at least three years prior to the date of his or her nomination to the Board but excluding, in the case only of the Directors named in the Prospectus, where the relationship ended before August 31, 2015.

4.2.4 Each Director nominee shall meet the requirements of applicable securities and other Laws and any exchange on which Voting Securities are listed.

4.2.5 No Director nominee may be proposed by the Province or the Nominating and Governance Committee to replace an incumbent Director if, taking into account the selection criteria identified pursuant to Section 4.3.1 and any other proposed Director nominees to replace incumbent Directors who have already been confirmed pursuant to Section 4.3, the Board would not collectively satisfy the Skills Matrix, Board Diversity Policy or any other policy relating to the composition of the Board forming part of Hydro One's Governance Standards. For clarity, notwithstanding the previous sentence, the Parties acknowledge that the Skills Matrix, Board Diversity Policy and other policies referred to in the previous sentence may include goals that the Board expressly intends to strive to meet over time (referred to here as "aspirational goals"). Nothing in this Section 4.2.5 shall prevent a Director nominee from being proposed who does not meet aspirational goals, provided his or her nomination would not prevent the Board from collectively satisfying any requirement of those policies that is then applicable or be reasonably likely to prevent the Board from satisfying any aspirational goal over the period of time if any, contemplated for that aspirational goal by the relevant policy.

4.2.6 The majority of the Board must at all times be resident Canadians (as defined in the OBCA). Neither the Province nor the Nominating and Governance Committee will nominate any Person for election or appointment as a Director if as a result of that nominee being elected or appointed as a Director, this requirement would not be met.

4.2.7 Notwithstanding this Section 4.2, each Director named in the Prospectus is qualified to be a director of Hydro One on the Effective Date whether or not he or she satisfies the qualifications set out in this Section 4.2 on that date. The Provincial Nominees on the Effective Date are those who have been identified as such in the Prospectus.

4.2.8 If the Province or the Nominating and Governance Committee nominates any individual who is an incumbent Director for election as a Director at an annual meeting of Shareholders held after the Effective Date, that individual shall not be subject to confirmation pursuant to Section 4.3.4 as satisfying the qualifications set out in this Section 4.2, except to the extent there has been a material change in that individual's circumstances since the Effective Date or his or her most recent confirmation pursuant to Section 4.3.4, as applicable, that would affect whether he or she satisfies the qualifications set out in this Section 4.2. For clarity, in determining whether there has been a material change in an individual's circumstances for this purpose, changes in the duration of an individual's term as a Director and in an individual's age shall be taken into account. The Province or the Nominating and Governance Committee, as applicable, shall promptly notify the other upon becoming aware of any such material change in circumstances regarding any incumbent Director.

4.3 Identification and Confirmation of Director Nominees

4.3.1 Each year following the annual meeting of Shareholders, the Province and representatives of the Nominating and Governance Committee shall meet to discuss which Directors each does not expect to re-nominate in the next one to five years (whether due to resignation or retirement or otherwise), with an emphasis on those Directors, if any, that each previously nominated that each does not expect to nominate for election at the next annual meeting of Shareholders ("**Expected Departing Directors**"). In this discussion the Province and representatives of the Nominating and Governance Committee shall consider the impact on the Board of not re-nominating the Expected Departing Directors and identify the selection criteria for nominees to replace those Expected Departing Directors, to ensure that the Board will collectively comply with this Agreement and collectively satisfy the Skills Matrix, Board Diversity Policy and any other policy relating to the composition of the Board forming part of Hydro One's Governance Standards. The representatives of the Nominating and Governance Committee shall also at this meeting recommend to the Province individuals whom the Nominating and Governance Committee has previously identified as potential candidates for nomination to the Board, provided that the Province shall have no obligation to nominate any of the recommended individuals as one of its Director nominees. This initial meeting between the Province and representatives of the Nominating and Governance Committee would be expected to occur within 60 days following each annual meeting of Shareholders.

4.3.2 Following the initial meeting between the Province and representatives of the Nominating and Governance Committee contemplated in Section 4.3.1, each of the Province and the Nominating and Governance Committee shall separately consider their respective Expected Departing Directors and their proposed Director nominees to replace those Directors. The Province and representatives of the Nominating and Governance Committee shall meet to discuss further their Expected Departing Directors and proposed replacement nominees under consideration. These subsequent meetings between the Province and representatives of the Nominating and Governance Committee would be expected to occur within 120 days following each annual meeting of Shareholders.

4.3.3 As soon as practicable following the discussions between the Province and representatives of the Nominating and Governance Committee referenced in Sections 4.3.1 and 4.3.2, each of the Province and the Nominating and Governance Committee shall provide one or more notices (each being a "**Nomination Notice**") setting out its proposed Director nominees, along with (i) sufficient background information about any nominee who is not an incumbent Director or (ii) in the case of an incumbent Director whose circumstances have materially changed as described in Section 4.2.8, sufficient information about the material change, so as in either case to allow the other to assess whether that nominee satisfies the qualifications set out in Section 4.2. Each of the Province and the Nominating and Governance Committee shall, in any event, deliver its Nomination Notice to the other at least 60 days (the "**Nomination Deadline**") prior to the date by which proxy solicitation materials must be mailed for purposes of the next annual meeting of Shareholders (the "**Circular Deadline**"). Hydro One shall notify the Province of the Nomination Deadline at least 20 days prior to the Nomination Deadline.

4.3.4 If the Province or the Nominating and Governance Committee has received a Nomination Notice from the other of a Director nominee (i) who is not an incumbent Director or (ii) who is an incumbent Director whose circumstances have materially changed as described in Section 4.2.8, in either case prior to the Nomination Deadline, the Province or the Nominating and Governance Committee, as the case may be, shall have ten Business Days to confirm or reject that Director nominee, acting reasonably, but may reject that nominee only on the grounds that the nominee does not satisfy the qualifications for Directors set out in Section 4.2 or, in the case of a nominee whose circumstances have materially changed as contemplated in Section 4.2.8, the nominee as a consequence of the change no longer satisfies such qualifications. Any Director nominee who is not rejected by the Nominating and Governance Committee or the Province, as the case may be, within ten Business Days of receiving a Nomination Notice of such nominee's nomination shall be proposed by Hydro One for election as a Director in accordance with Section 4.1.1.

4.3.5 If any Director nominee of the Province or the Nominating and Governance Committee is rejected pursuant to Section 4.3.4, the Province or the Nominating and Governance Committee, as the case may be, shall be entitled to deliver one or more Nomination Notices nominating a replacement Director nominee until a nominee is confirmed by the other in accordance with Section 4.3.4.

4.3.6 If notwithstanding the expectations of the Province and the Nominating and Governance Committee regarding Expected Departing Directors, there is any Expected Departing Director: (i) for whom no replacement nominee has been confirmed in accordance with Section 4.3.4 prior to the Circular Deadline and (ii) who has not resigned, that Director shall be re-nominated in accordance with Section 4.1.1.

4.3.7 The Province and the Nominating and Governance Committee shall use commercially reasonable efforts to cause Director nominees to be confirmed prior to the Circular Deadline. If insufficient Director nominees of either the Province or the Nominating and Governance Committee are confirmed by the Circular Deadline and Section 4.3.6 does not apply, the Province and the Nominating and Governance Committee shall, acting reasonably, consider and implement alternatives to ensure that applicable Law and the provisions of Section 4.1.1 with respect to the number of Directors each is entitled to nominate are complied with in respect of the applicable annual meeting of Shareholders. These alternatives may include reducing the number of directors to be elected at that annual meeting of Shareholders or delaying the date of that annual meeting of Shareholders until Section 4.1.1 may be complied with.

4.3.8 The parties, acting reasonably, shall apply a process that is as substantially equivalent to the process provided for in this Section 4.3 as is practicable in the circumstances, with respect to any meeting of Shareholders to elect Directors other than an annual meeting of Shareholders.

4.3.9 If there is any dispute with respect to the process for nominating Directors provided for in this Section 4.3, either the Province or the Nominating and Governance Committee may request that ADR Chambers Canada appoint a single arbitrator with expertise in corporate governance matters to adjudicate the dispute. The arbitration proceedings will be conducted in accordance with Article 7.

4.4 Replacement Board Nominees in case of Vacancies

4.4.1 If one or more vacancies occurs on the Board:

(a) if the vacancy is caused by (i) a Provincial Nominee ceasing to serve as a Director or (ii) an increase in the number of Directors such that, pursuant to Section 4.1.1(b), the Province would be entitled to nominate an additional Director at the next meeting of Shareholders at which Directors are to be elected, then the Province shall nominate an individual to fill the vacancy, provided that the nominee shall be subject to confirmation by the Nominating and Governance Committee in accordance with a process that is as substantially equivalent to the process provided for in Section 4.3 as is practicable in the circumstances, as applied by the Parties, acting reasonably, and so that the vacancy can be filled within 90 days of the vacancy occurring;

(b) if the vacancy is created by the CEO ceasing to serve in that office, the vacancy shall be filled by the replacement CEO appointed in accordance with Section 3.3; and

(c) otherwise, the Nominating and Governance Committee shall nominate an individual to fill the vacancy, provided that the nominee shall be subject to confirmation by the Province in accordance with a process that is as substantially equivalent to the process provided for in Section 4.3 as is practicable in the circumstances, as applied by the Parties acting reasonably and so that the vacancy can be filled within 90 days of the vacancy occurring.

4.4.2 If:

(a) the replacement nominee to fill a vacancy as described in Section 4.4.1(a) or Section 4.4.1(c) has been confirmed as provided for in that Section; or

(b) upon the approval of the CEO’s replacement pursuant to Section 3.3,

then in either such case, the Board shall appoint that replacement as a Director to fill the applicable vacancy.

4.5 Province’s Voting Rights at Contested Shareholders Meetings

Notwithstanding Section 4.1.3, the Province may vote its Voting Securities or withhold from voting its Voting Securities in favour of any Director nominee (including for clarity the Provincial Nominees) at any Contested Meeting, at its sole discretion, except that the Province shall vote its Voting Securities in favour of the election of the CEO as a Director. The Province shall not, however, nominate for election at any Contested Meeting or Removal Meeting any directors except in accordance with Section 4.1 or Section 4.7.3, as the case may be. For clarity, subsequent to any Contested Meeting, the provisions of this Agreement will continue to apply with respect to all future Director nominations.

4.6 Province's Right to Withhold Votes for Directors

4.6.1 Notwithstanding Section 4.1.3 but subject to Section 4.7.6, at any meeting of Shareholders at which Directors are to be elected, the Province may choose to withhold from voting in favour of any Director nominee with the exception of the CEO and, at the sole discretion of the Province, the Chair, provided that the Province shall do so only if it withholds from voting in favour of all Director nominees with the exception of the CEO and, at the sole discretion of the Province, the Chair. In the case of any annual meeting of Shareholders, the Province shall notify Hydro One in advance of the Circular Deadline of its intent to withhold from voting in favour of all Director nominees with the exception of the CEO and, at the sole discretion of the Province, the Chair.

4.6.2 If after a Shareholders meeting to elect Directors where the Province withholds from voting in favour of Director nominees in accordance with Section 4.6.1, one or more Directors elected at the Shareholders meeting tender their resignations as Directors pursuant to the Majority Voting Policy, the Board shall take whatever actions it determines are appropriate in the circumstances in accordance with the Majority Voting Policy, including:

(a) accepting Director resignations in a sequential manner and only after a replacement Director for the resigning Director has been identified and confirmed pursuant to Section 4.4;

(b) accepting some but not all Director resignations until sufficient replacement Directors for the resigning Directors have been identified and confirmed pursuant to Section 4.4;

(c) calling a Shareholders meeting for the election of Directors and accepting Director resignations only upon the election of replacement Directors at the Shareholders meeting;

(d) not accepting the Director resignations until Director nominees are elected at the next annual meeting of Shareholders; or

(e) rejecting the Director resignations.

4.7 Province's Right to Replace Directors

4.7.1 Notwithstanding any other provision of this Agreement, the Province may at any time provide Hydro One with a notice (a "**Removal Notice**") setting out its intention to request Hydro One to hold a Shareholders meeting for the purposes of removing all of the Directors then in office, including the Provincial Nominees, with the exception of the CEO and, at the Province's sole discretion, the Chair (a "**Removal Meeting**").

4.7.2 Upon the Province delivering a Removal Notice to Hydro One, the Chair (whether or not the Province proposes to remove him or her) shall coordinate the establishment of a committee comprising:

(a) one representative of each of the five largest beneficial owners of Voting Securities known to Hydro One, excluding the Province, willing to provide representatives to serve on the committee or if fewer than five such beneficial owners of Voting Securities are willing to provide representatives to serve on the committee, then one representative of each of the beneficial owners of Voting Securities, but a minimum of three, willing to do so**,** or

(b) if at least three such beneficial owners of Voting Securities are not willing to provide representatives to serve on the committee within 30 days of the Province delivering a Removal Notice, then the individuals that the Province proposes to nominate as replacement Directors pursuant to Section 4.1.1

(in either case, the "**Ad Hoc Nominating Committee**"). In addition to supporting the establishment of the Ad Hoc Nominating Committee, the Chair shall assist the Ad Hoc Nominating Committee in carrying out its duties in an impartial manner.

4.7.3 The Province and the Ad Hoc Nominating Committee, acting reasonably, shall identify and confirm the replacement Director nominees to be nominated at the Removal Meeting to replace the incumbent Directors in accordance with Section 4.1.1 and a process that is as substantially equivalent to the process provided for in Section 4.3 as is practicable in the circumstances, as applied by the Province, Hydro One and the Ad Hoc Nominating Committee, acting reasonably, with the Ad Hoc Nominating Committee taking the place of the Nominating and Governance Committee, provided that none of the Director nominees determined pursuant to this Section 4.7 may be Directors other than the Chair if the Province elects pursuant to Section 4.7.1 not to vote for the removal of the Chair.

4.7.4 Hydro One shall call the Removal Meeting forthwith upon all the Director nominees being confirmed pursuant to Section 4.7.3, and shall hold the Removal Meeting within 60 days after all the Director nominees being confirmed pursuant to Section 4.7.3. From the time the Province delivers a Removal Notice until the Removal Meeting, the Directors then in office shall, in exercising their fiduciary duty with a view the best interests of Hydro One, take into account the Province's intention to cause a new Board to be constituted at the Removal Meeting and the desirability that the actions of the current Board not interfere with ability of any new Board to exercise its responsibility to oversee the business and affairs of Hydro One after the Removal Meeting in accordance with the Governance Principles, including with respect to each of the matters referred to in Section 2.3.

4.7.5 Hydro One shall cause the proxy solicitation materials, including the meeting circular, for the Removal Meeting, to contain information customary for Director nominees about the replacement Director nominees identified and confirmed pursuant to Section 4.7.3. Hydro One shall take all other commercially reasonable actions necessary to conduct the Removal Meeting and to permit the election or appointment to the Board of the replacement Director nominees, if a resolution is passed at the meeting to remove some or all of the Directors.

4.7.6 At the Removal Meeting, the Province shall vote in favour of removing the current Directors with the exception of the CEO and, if the Province elects pursuant to Section 4.7 not to vote for removal of the Chair, the Chair and shall vote in favour of replacement Director nominees determined pursuant to this Section 4.7.

4.7.7 For clarity, subsequent to any Removal Meeting, the provisions of this Agreement, including Section 4.3, will continue to apply with respect to all future Director nominations.

4.8 Province Below 40% of Voting Securities

If the Province:

4.8.1 ceases to own Voting Securities to which are attached 40% of the votes that may be cast on the election of Directors at a meeting of Shareholders (the "**Voting Security Threshold**"); and

4.8.2 the Province does not subsequently acquire Voting Securities so that it meets the Voting Security Threshold prior to the next Nomination Deadline following the second anniversary of the first date on which the Province ceased to own Voting Securities sufficient to meet the Voting Security Threshold;

then commencing on that next Nomination Deadline until the Province again owns Voting Securities sufficient to meet the Voting Security Threshold, the number of Directors that the Province shall be entitled to nominate pursuant to Section 4.1.1(b) and pursuant to any other provision of this Agreement that refers to that Section to determine how many Directors the Province may nominate, shall be proportionate to the number of votes that the Province may cast on the election of Directors at a meeting of Shareholders out of the total number of votes that may be cast. The number of Directors that the Province is entitled to nominate pursuant to this calculation shall be rounded to the nearest whole number and based on the Province's ownership of Voting Securities as of (i) in the case of a nomination for an upcoming annual meeting of Shareholders, the Nomination Deadline for that meeting and (ii) in all other cases, the Nomination Deadline prior to the most recent annual meeting of Shareholders.

ARTICLE 5
CONFIDENTIALITY OF INFORMATION PROVIDED

5.1 Confidentiality Agreement

The Parties shall enter into and comply with a confidentiality agreement in the form attached as Schedule “B” to this Agreement.

ARTICLE 6
PRE-EMPTIVE RIGHT

6.1 Offer to Subscribe for Common Shares

If Hydro One proposes to issue any Voting Securities or any securities that are convertible into or exchangeable for Voting Securities (the “**Offered Securities**”), whether pursuant to a public offering or a private placement or otherwise but excluding an Excluded Issuance (a “**Proposed Offering**”), Hydro One shall offer (the “**Offer**”) to the Province the right to subscribe for and purchase up to 45% of the number or principal amount, as applicable, of the Offered Securities, in accordance with this Article 6 and subject to applicable Laws and to the rules of any stock exchange on which Hydro One’s securities are listed. If applicable Laws or rules of a stock exchange require Hydro One to obtain shareholder or other approvals to issue Offered Securities in accordance with this Article 6, Hydro One shall use all commercially reasonable efforts to obtain those approvals.

6.2 Delivery of the Offer

Hydro One shall notify the Province as soon as reasonably practicable that it is contemplating a Proposed Offering and shall deliver an Offer in any event not later than 30 days prior to the date that Hydro One enters into an agreement to issue Offered Securities (including a bid letter in connection with a “bought deal” offering). The Offer shall be in writing and, subject to Section 6.3, shall contain the terms and conditions of the Offered Securities, including the price at which the Offered Securities are to be issued, the number of Offered Securities which the Province is entitled to purchase pursuant to this Article 6, the proposed outside date (the “**Offering Outside Date**”) for completing the Proposed Offering, which date shall not be more than 60 days after the date of the Offer, and any other details of the Proposed Offering. The Offer must also state that (i) if the Province wishes to purchase Offered Securities pursuant to this Article 6, it shall do so by giving written notice (the “**Response**”) of the exercise of that right to Hydro One, and (ii) if Province wishes to subscribe for a number of Offered Securities less than the number to which it is entitled pursuant to this Article 6, it may do so. For clarity, the Offer may be contingent upon Hydro One determining to proceed with the Proposed Offering in its sole discretion. Notwithstanding that an Offer may be contingent, the Province acknowledges that the fact that Hydro One is contemplating the Proposed Offering may constitute material information regarding Hydro One, and that the requirements of securities Laws, as well as of the Confidentiality Agreement and internal controls referred to therein, may restrict disclosure of the information and trading in securities of Hydro One by those with knowledge of that information.

6.3 Offer Price and Number of Securities if Public Offering

If the Offer is being delivered in connection with a proposed best-efforts or fully underwritten public offering (including an offering proposed on a "bought deal" basis) through an agent or underwriter, the Offer may include a range for the size of the Proposed Offering (expressed in number of Offered Securities or aggregate dollar value of the Proposed Offering), rather than a fixed number of Offered Securities and may state that the actual price per Offered Security shall be the offering price to be agreed upon by Hydro One in the agency agreement, bid letter or underwriting agreement, as the case may be, relating to the issuance.

6.4 Province's Response

The Offer shall specify a deadline by which the Province must deliver the Response to Hydro One, which deadline shall be no earlier than ten Business Days after the Province receives the Offer. The Province shall be deemed to have declined the Offer if it does not deliver a Response by that deadline. In the Response, the Province must specify the number of Offered Securities that it wishes to purchase. If the Offer was delivered in connection with a proposed best-efforts or fully underwritten public offering (including an offering proposed on a "bought deal" basis) through an agent or underwriter, the Response may specify the maximum price or a range of prices per Offered Security at which the Province will exercise its right to subscribe for or purchase Offered Securities under the Offer (provided that the Response may specify more than one maximum price per Offered Security together with the corresponding maximum number of Offered Securities to be subscribed for or purchased at each maximum price). Any Response delivered by the Province to Hydro One will be irrevocable and will be a legally binding obligation of the Province to subscribe for and purchase the Offered Securities specified therein, provided that if the Proposed Offering is not completed by the Offering Outside Date, the Offer will be deemed to be automatically revoked.

6.5 Offered Securities Not Subscribed For

Any Offered Securities not subscribed for and purchased by the Province pursuant to a Proposed Offering may be issued to any other person pursuant to the Proposed Offering.

6.6 Purchase of Offered Securities

The completion of any purchase of Offered Securities by the Province pursuant to a Proposed Offering shall be on the same terms and on the same date as the completion of that Proposed Offering, unless otherwise agreed by the Province.

6.7 Subsequent Offerings

If Hydro One proposes to issue Voting Securities or securities convertible into or exchangeable for Voting Securities otherwise than pursuant to the Proposed Offering and not later than the Offering Outside Date for the Proposed Offering, Hydro One shall again comply with this Article 6. If Hydro One is continuing in good faith to contemplate a Proposed Offering after the Offering Outside Date for that Proposed Offering, Hydro One may deliver further Offers that have the effect of extending the Offering Outside Date for that Proposed Offering, provided that

(i) the extended Offering Outside Date for that Proposed Offering occurs no later than four months after the original Offering Outside Date for that Proposed Offering, and (ii) after the Offering Outside Date for any particular Proposed Offering (including all permitted extensions, if any were effected, of that Offering Outside Date), Hydro One shall not deliver any Offer for any further Proposed Offering for a minimum of 90 days after that Offering Outside Date.

6.8 No Obligation to Subscribe

The Province shall have no obligation to subscribe for any Offered Securities, except for the Offered Securities specified in any Response delivered by the Province to Hydro One.

ARTICLE 7
DISPUTE RESOLUTION

7.1 Arbitration

Each Party acknowledges and agrees that any dispute arising out of or in connection with this Agreement shall be resolved solely by arbitration in accordance with the arbitration rules set out in Schedule “D” (the “**Arbitration Rules**”). For greater certainty, the Province may not seek, nor is the Province entitled to obtain, status as a “complainant” for the purpose of commencing an oppression remedy proceeding or derivative claim proceeding in court, as described in Section 8.6.2(a) or 8.6.2(b), but the Province is otherwise entitled to assert such claims by way of arbitration in respect of any dispute arising out of or in connection with this Agreement.

7.2 Location of Arbitration

The place of arbitration shall be at Toronto, Ontario unless the Parties otherwise agree.

7.3 Laws of Ontario

The law to be applied in connection with the arbitration shall be the law of Ontario, including its conflict of law rules.

7.4 Arbitration Act, 1991

The provisions of the *Arbitration Act*, 1991 (Ontario) shall apply to the extent that they are not inconsistent with this Article or with the Arbitration Rules.

ARTICLE 8
GENERAL PROVISIONS

8.1 Financial Obligations of the Province

Pursuant to the FAA, any payment required to be made by the Province pursuant to this Agreement is subject to there being sufficient appropriation by the Legislative Assembly of Ontario for the fiscal year in which the payment is to be made or the payment having been charged to an appropriation for a previous year.

8.2 Effective Date

This Agreement shall become effective on the Effective Date.

8.3 Amendments to this Agreement

This Agreement may be amended only by an instrument in writing executed by each of the Parties. If there are changes in circumstances in the future that impact the original purpose and intention of the parties in entering into this Agreement, the Parties shall cooperate in good faith to amend this Agreement to reflect those changes in circumstances.

8.4 Term

This Agreement may be terminated only with the mutual agreement of both Parties.

8.5 Termination Not to Affect Rights or Obligations

A termination of this Agreement shall not affect or prejudice any rights or obligations that have accrued or arisen under this Agreement prior to the termination, which rights and obligations shall survive the termination.

8.6 No Third Party Rights

8.6.1 Notwithstanding any possible inferences to the contrary:

(a) the Parties intend that the provisions of this Agreement shall not create any right or cause of action in or on behalf of any Person who is not a Party to this Agreement (including without limitation, any Shareholder, creditor, Director or officer of Hydro One); and

(b) no Person other than the Parties shall be entitled to enforce the provisions of this Agreement in any legal proceeding in any forum.

8.6.2 For clarity, Section 8.6.1 does not preclude, and is not intended to preclude, any Shareholder or other stakeholder of Hydro One from obtaining status as a complainant:

(a) for the purpose of applying to court for leave under the procedure known as the "derivative action", that is provided for under section 246 of the OBCA to bring an action in the name and on behalf of Hydro One to enforce the rights of Hydro One under this Agreement; or

(b) for the purpose of pursuing the proceeding known as an "oppression proceeding" in relation to this Agreement under Section 248 of the OBCA.

Hydro One irrevocably agrees not to raise any objection on the basis of Section 8.6.1 it might now or hereafter have to any Shareholder or other stakeholder of Hydro One obtaining status as a complainant for the purpose described in Sections 8.6.2(a) or 8.6.2(b).

However, for clarity, Hydro One reserves absolutely its right otherwise to contest (on any grounds whatsoever that it considers to be appropriate) any application to the court by any Shareholder for leave to bring a derivative action or to pursue an oppression proceeding.

8.7 Representations and Warranties of Hydro One

Hydro One represents and warrants that this Agreement and the performance by Hydro One of its obligations under this Agreement: (i) has been duly authorized, executed and delivered by it, and is a valid and binding obligation of Hydro One, enforceable against Hydro One in accordance with its terms, except as enforceability may be limited by bankruptcy, insolvency, reorganization, moratorium or other similar Laws affecting the enforcement of creditors' rights generally and by general equitable principles (regardless of whether the enforceability is considered in a proceeding in equity or at Law); and (ii) does not and will not violate any Law, the Constating Documents or any provision of any agreement or other instrument to which Hydro One or any of its properties or assets is bound, or result in a breach of or constitute (with due notice or lapse of time or both) a default under any such agreement or other instrument, or conflict with any such agreement or other instrument so as to prevent Hydro One from either performing its obligations under, or complying with, both this Agreement and any such agreement or other instrument.

8.8 Representations and Warranties of the Province

8.8.1 The Province represents and warrants that this Agreement and the performance by the Province of its obligations under this Agreement:

(a) has been duly authorized, executed and delivered by the Province, and is a valid and binding obligation of the Province, enforceable against the Province in accordance with its terms, subject to:

(i) limitations with respect to the enforcement of remedies by bankruptcy, insolvency, reorganization, moratorium, winding-up, arrangement, fraudulent preference and conveyance and other similar Laws affecting the enforcement of creditors' rights generally and by general equitable principles (regardless of whether such enforceability is considered in a proceeding in equity or at Law);

(ii) general equitable principles and the fact that the availability of equitable remedies such as specific performance and injunction are not available against the Province and that a court may stay proceedings or the execution of judgments;

(iii) statutory limitations of general application respecting the enforceability of claims against the Province or its property;

(iv) section 11.3 of the FAA;

(v) the Province's powers to retain amounts for which Hydro One is indebted to the Province under this Agreement or otherwise, by way of deduction or set off out of any money owing by the Province to Hydro One under this Agreement, pursuant to section 43 of the FAA; and

(b) does not and will not violate any Laws of any province of Canada or the Laws of Canada or any provision of any agreement or other instrument to which the Province or any of its properties or assets is bound, or conflict with or constitute (with due notice or lapse of time or both) a default under any such agreement or other instrument.

8.9 Notices, Designations and Other Communications

Any notice, designation or other communication required or permitted to be given under this Agreement shall be in writing and shall be given by prepaid first class mail, by facsimile or other means of electronic communication or by delivery by hand as hereafter provided. Any such notice, designation or other communication, if mailed by prepaid first class mail at any time other than during a general discontinuance of postal service due to strike, lockout or otherwise, shall be deemed to have been received on the fourth Business Day after the post marked date thereof, or if sent by facsimile or other means of electronic communication, shall be deemed to have been received on the Business Day following the sending, or if delivered by hand shall be deemed to have been received on the Business Day it is delivered to the applicable address noted below either to the individual designated below or to an individual at such address having apparent authority to accept deliveries on behalf of the addressee. Notice of change of address shall also be governed by this Section. Any designation of a Provincial Representative shall be signed by the Minister of Energy and shall state the name, address and fax number of the Provincial Representative and the particular matter or matters under this Agreement to which the designation relates. Any such designation shall remain in full force and effect with respect to such Provincial Representative and in respect of such matter or matters until subsequently amended or revoked by the Minister of Energy. In the event of a general discontinuance of postal service due to strike, lock out or otherwise, notices, designations or other communications shall be delivered by hand or sent by facsimile or other means of electronic communication and shall be deemed to have been received in accordance with this Section. Notices, designations and other communications shall be addressed as follows:

(a) if to Hydro One:

Hydro One Limited
483 Bay Street
South Tower, Suite 800
Toronto, Ontario M5G 2P5

Attention: General Counsel
Fax: 416-345-6056

With a copy (which shall not constitute notice) to:

Osler, Hoskin & Harcourt LLP
100 King Street West
1 First Canadian Place
Suite 6200, P.O. Box 50
Toronto, ON M5X 1B8

Attention: Steve Smith / Michael Innes
Fax: 416-862-6666

(b) if to the Province:

5th Floor
56 Wellesley Street West
Toronto, ON M7A 2E7

Attention: Legal Director, Legal Services Branch serving the Minister of Energy
Fax: 416-325-1781

With a copy (which shall not constitute notice) to:

Torys LLP
79 Wellington Street West, Suite 3000
Box 270, TD South Tower
Toronto, ON M5K 1N2

Attention: Sharon Geraghty
Fax: 416-865-8138

with a copy to the applicable Provincial Representative (to the extent one has been designated by the Minister of Energy under this Section 8.9 but only in respect of the matter or matters in respect of which such Provincial Representative has been so designated).

8.10 Invalidity of Provisions

Each of the provisions contained in this Agreement is distinct and severable and a declaration of invalidity or unenforceability of any such provision or part thereof by a court of competent jurisdiction shall not affect the validity or enforceability of any other provision. The Parties shall engage in good faith negotiations to replace any provision which is declared invalid or unenforceable with a valid and enforceable provision, the economic and substantive effect of which comes as close as possible to that of the invalid or unenforceable provision which it replaces.

8.11 Waiver

Except as expressly provided in this Agreement, no waiver of any provision or of any breach of any provision of this Agreement shall be effective or binding unless made in writing and signed by the party purporting to give such waiver and, unless otherwise provided in such written waiver, shall be limited to the specific provision or breach waived. No waiver by any Party hereto of any provisions or of any breach of any term, covenant, representation or warranty contained in this Agreement, in one or more instances, shall be deemed to be or construed as a further or continuing waiver of that or any other provision (whether or not similar) or of any breach of that or any other term, covenant, representation or warranty contained in this Agreement.

8.12 Governing Law

This Agreement shall be governed by and construed in accordance with the Laws of the Province of Ontario and the Laws of Canada applicable therein.

8.13 Further Assurances

Each of the Parties shall, with reasonable diligence, provide such further documents and instruments to the other Party and do all such things and provide all such reasonable assurances as may be required or as are reasonably desirable to effect the purpose of this Agreement and carry out its provisions.

8.14 Enurement; Assignment

This Agreement shall enure to the benefit of and be binding upon the Parties and their respective successors and legal personal representatives. This Agreement may not be assigned by either Party except with the prior written consent of the other Party.

8.15 Counterparts

This Agreement may be signed in counterparts and each such counterpart shall constitute an original document and such counterparts, taken together, shall constitute one and the same instrument.

[Signature page follows]

IN WITNESS WHEREOF the Parties have executed this Agreement.

HYDRO ONE LIMITED

By: *"Mayo Schmidt"*

Name: Mayo Schmidt

Title: President and Chief Executive Officer

[Signature page to Governance Agreement]

HER MAJESTY THE QUEEN IN RIGHT OF ONTARIO AS REPRESENTED BY THE MINISTER OF ENERGY

By: *“Bob Chiarelli”*

Bob Chiarelli

[Signature page to Governance Agreement]

SCHEDULE "A"

Official Or Employee Of The Province

Each of the following individuals is an "Official or Employee of the Province":

1. A public servant as defined by the *Public Service of Ontario Act, 2006* ("**PSOA**") who is employed under Part III of the PSOA in a ministry of the Government of Ontario.

2. The Secretary of the Cabinet.

3. A deputy minister of the Government of Ontario.

4. A member of the Executive Council or an employee of a minister's office.

5. A member of the Legislative Assembly of Ontario or an employee of a member's office.

6. A director or an officer or employee, of the following organizations:

    (a) The Ontario Financing Authority;

    (b) The Independent Electricity System Operator;

    (c) Ontario Power Generation Inc.;

    (d) Electrical Safety Authority;

    (e) Ontario Electricity Financial Corporation;

    (f) Infrastructure Ontario; or

    (g) A Subsidiary of, or a Person controlled by, any organization listed in sub-paragraphs (a) to (f).

7. A member, officer or employee of the Ontario Energy Board.

8. A person who was previously a Director or a director of any Hydro One Entity or Person controlled by Hydro One, other than a person who is a Director on the date of this Agreement.

9. An officer or employee of Hydro One, or any Hydro One Entity or Person controlled by Hydro One, other than the chief executive officer of Hydro One.

SCHEDULE “B”

Form of Confidentiality Agreement

CONFIDENTIALITY AGREEMENT

THIS AGREEMENT is made as of the 5th day of November, 2015

B E T W E E N:

HYDRO ONE LIMITED, a corporation incorporated under the laws of the Province of Ontario

– and –

HER MAJESTY THE QUEEN IN RIGHT OF ONTARIO

(the "**Province**"), as represented by the Minister of Energy.

Hydro One Limited and its subsidiaries (the "**Company**") expect to provide the Province, pursuant to the governance agreement dated as of the date hereof between the Province and Hydro One Limited (the "**Governance Agreement**") and the registration rights agreement dated as of the date hereof between the Province and Hydro One Limited (the "**Registration Rights Agreement**"), with Company Confidential Information (as defined in Section 2 below) from time to time. The Governance Agreement requires the parties to enter into this confidentiality agreement (this "**Agreement**") governing the use and disclosure by the Province of the Company Confidential Information and by the Company of the Province Confidential Information (as defined in Section 14 below).

Confidentiality Obligations in favour of the Company:

In consideration of the Company providing, or causing to be provided, the Company Confidential Information to the Province and/or its Representatives (as defined below in Section 1) from time to time as required by the Governance Agreement and the Registration Rights Agreement and other good and valuable consideration (the receipt and sufficiency of which are hereby acknowledged by each of the parties), the parties agree to the following:

1. In this Agreement, "**Representatives**" of the Province means, collectively, any persons appointed pursuant to the *Executive Council Act* (Ontario) and the Province's directors, officers, officials, employees, public servants as defined by the *Public Service of Ontario Act, 2006* (Ontario), managers, agents, representatives, lawyers, accountants, consultants and financial and other advisors, provided that such persons or entities shall only be considered Representatives if such persons or entities have received Company Confidential Information.

2. In this Agreement, "**Company Confidential Information**" means all information and material of, or relating to, the Company and its Representatives (as defined below in Section 13), whether in oral, written, graphic, electronic or any other form or medium, including without limitation information and material concerning the Company's past,

present or future customers, suppliers, technology, business, policy decisions, affairs, financial conditions, assets, liabilities, operations, plans, potential financings or transactions or other activities that is furnished to the Province or its Representatives pursuant to the Governance Agreement and/or the Registration Rights Agreement on or after the date of this Agreement. For the purposes of this definition, "**Company Confidential Information**" includes the portion of any plans, proposals, reports, analyses, notes, compilations, studies, forecasts or other documents prepared by the Province or its Representatives that are based on, contain, incorporate or otherwise reflect Company Confidential Information.

3. Notwithstanding Section 2, the following will not constitute "**Company Confidential Information**" under this Agreement:

   (a) for the avoidance of doubt (i) information that the Province or its Representatives receive or obtain solely pursuant to any Applicable Law (as defined in Section 8 below) and (ii) information that the Province or its Representatives receive or obtain other than pursuant to the Governance Agreement and/or the Registration Rights Agreement.

   (b) information that the Province or its Representatives receive or obtain from a third person who is not known by the Province to be prohibited from transmitting the information to the Province or its Representatives by a contractual, legal or fiduciary obligation not to disclose such information;

   (c) information that has been publicly disclosed by the Company (including, for greater certainty, information publicly disclosed through regulatory filings or processes), or that is or becomes publicly available through no fault of the Province or its Representatives in breach of this Agreement or other contractual, legal or fiduciary obligation not to disclose such information;

   (d) information that was independently developed by the Province or its Representatives without any reference to the Company Confidential Information; and

   (e) information that the Company agrees in writing is not Company Confidential Information for the purposes of this Agreement.

4. The Province and its Representatives shall only use Company Confidential Information in connection with the Province's exercise or enforcement of its rights under the Governance Agreement and the Registration Rights Agreement and in connection with evaluating, overseeing and determining how to manage its investment in Hydro One Limited, including whether to dispose of, return or acquire additional interests in Hydro One Limited and exercising its rights as a shareholder (including board representation rights), in each case in accordance with the Governance Agreement, the Registration Rights Agreement and Applicable Law (the "**Purpose**").

5. The Province and the Company acknowledge that the Province and certain of its Representatives are subject to the *Freedom of Information and Protection of Privacy Act*

(Ontario), as amended or supplemented from time to time (**"FIPPA"**), and that FIPPA applies to and governs all records (as such term is defined in FIPPA) in the custody or control of the Province and those Representatives, including Company Confidential Information described in this Agreement. Subject to the obligations of the Province under Section 11 of this Agreement, the Province's obligations pursuant to this Agreement to maintain such information in confidence are subject to any requirement the Province and its Representatives have under Applicable Law to disclose information, including records that must be disclosed by the Province and its Representatives under FIPPA. The provisions of this Section 5 shall survive termination of this Agreement and shall prevail over any other provisions of this Agreement to the contrary.

6. The Province acknowledges and agrees that the Company may not be able to furnish or disclose any information about an identifiable individual or other information that is subject to Applicable Law relating to the collection, use, storage and/or disclosure of information about an identifiable individual, including the *Personal Information Protection and Electronic Documents Act* (Canada) and *Personal Health Information Protection Act, 2004* (Ontario), whether or not such information is confidential, (collectively, "**Personal Information**") to the Province or any of its Representatives unless consents to the disclosure of such Personal Information have been obtained from the relevant individual(s) as required, or the Company is otherwise authorized by Applicable Law to disclose such information. If any Personal Information is disclosed to the Province and/or its Representatives, the Province and its Representatives shall, subject to their obligations under Applicable Law, (i) use the Personal Information only in connection with the Purpose, (ii) limit disclosure of the Personal Information to what is authorized by the Company or required by Applicable Law, (iii) promptly refer any persons looking for access to their Personal Information to the Company, (iv) use appropriate security measures to protect the Personal Information, and (v) comply with Applicable Law relating to the privacy of the Personal Information.

7. The Province acknowledges and agrees that pursuant to the provisions of the Company's Electricity Distribution Licenses issued by the Ontario Energy Board, the Company may not be able to furnish or disclose any information regarding a consumer, retailer, wholesaler or generator, whether or not such information is confidential, (collectively, "**Customer Information**") to the Province or any of its Representatives unless consent to the disclosure of such Customer Information has been obtained, or the Company is otherwise authorized by its Electricity Distribution License or Applicable Law to disclose such information. If any Customer Information is disclosed to the Province and/or its Representatives, the Province and its Representatives shall, subject to their obligations under Applicable Law, (i) limit the use of the Customer Information to the Purpose, (ii) limit disclosure of the Customer Information to what is authorized by the Company or required by Applicable Law, (iii) promptly refer any persons looking for access to their Customer Information to the Company, (iv) use appropriate security measures to protect the Customer Information, and (v) comply with Applicable Law relating to the protection of the Customer Information.

8. The Province agrees that all Company Confidential Information shall be held and treated by the Province and its Representatives in confidence and shall not be disclosed by the

Province or its Representatives in any manner whatsoever, in whole or in part, except as expressly provided in this Agreement, as required by FIPPA or by any law, statute, rule, regulation, ordinance, judgment, code, guideline, order, writ, directive, decision, ruling, decree, award or other pronouncement or instrumentality of any federal, provincial or municipal government, parliament or legislature, or of any regulatory authority, agency, commission, tribunal, board or department of any such government, parliament or legislature, or of any court or other law, regulation or rule-making entity, having jurisdiction in the relevant circumstances (collectively, "**Applicable Law**"), or with the Company's prior written consent.

9. The Province also agrees (i) to use the same means to protect the confidentiality of the Company Confidential Information that the Province would use to protect its own confidential and proprietary information (but in any event, no less than reasonable means), (ii) to disclose Company Confidential Information only to its Representatives who need to know the Company Confidential Information for the Purpose, who are informed by the Province of the confidential nature of the Company Confidential Information and who agree to be bound by the terms of this Agreement, (iii) to take all necessary steps to require that its Representatives comply with and are bound by the terms and conditions of this Agreement, and (iv) to be responsible for any breach by its Representatives of any terms of this Agreement applicable to the Province's Representatives (as if the Province's Representatives were parties to and bound by those provisions of this Agreement). The provisions of clause (iv) of this Section 9 shall survive termination of this Agreement.

10. The Province acknowledges that certain of the Company Confidential Information that it receives or obtains may be information, including records prepared by or for counsel for use in giving legal advice or in contemplation of or for use in litigation, to which solicitor-client privilege and/or litigation privilege attaches (collectively, "**Privileged Information**"). The Province acknowledges and agrees that access to the Privileged Information is not intended and should not be interpreted as a waiver of any privilege in respect of Privileged Information or of any right to assert or claim privilege in respect of Privileged Information. To the extent there is any waiver of privilege, it is intended to be a limited waiver in favour of the Province, solely for the purposes and on the terms set out in this Agreement.

11. In the event that the Province or any of its Representatives are required by Applicable Law, by oral questions, interrogatories, requests for information or documents, subpoena, criminal or civil investigative demand, legislative committee or officer, or similar process to disclose any Company Confidential Information, the Province or such Representative, as the case may be, shall, to the extent permitted by Applicable Law, provide the Company with prompt written notice of such requirement so that the Company may seek a protective order or other appropriate remedy, if available, or waive compliance with the provisions of this Agreement. The Province shall thereafter cooperate with the Company to prevent such disclosure (including cooperating in obtaining a protective order or other appropriate remedy). Where a request is made to the Province or its Representatives for access to information subject to this Agreement under FIPPA, the Province or its Representatives shall provide the Company with notice of the request, and the

opportunity to make submissions to the Province or its Representatives about disclosure of the records, in accordance with section 28 of FIPPA. In the event that the Company is unable to obtain a protective order or other remedy, the Province or such Representative, as the case may be, may disclose only that portion of the Company Confidential Information which the Province or such Representative is advised by counsel (internal or external) as being required to disclose under FIPPA or by other Applicable Law. The Province or such Representative, as the case may be, shall use reasonable efforts to obtain reliable assurance that confidential treatment will be afforded to any Company Confidential Information so disclosed. The parties acknowledge, however, that Province cannot require any person who receives information under FIPPA to maintain such information in confidence. The provisions of this Section 11 shall survive termination of this Agreement.

12. The Company Confidential Information provided by the Company to the Province and/or its Representatives shall at all times remain the property of the Company or its Representatives (as defined below in Section 13), as applicable, and by making Company Confidential Information available to the Province, neither the Company nor its Representatives shall be deemed to be granting any license or other right under or with respect to any trade secret, patent, copyright, trademark, or other proprietary or intellectual property right. The provisions of this Section 12 shall survive termination of this Agreement.

<u>Confidentiality Obligations in favour of the Province:</u>

In consideration of the Province providing, or causing to be provided, the Province Confidential Information (as defined below) to the Company and its Representatives (as defined below) from time to time in connection with the Purpose for good and valuable consideration (the receipt and sufficiency of which are hereby acknowledged by each of the parties), the parties agree to the following:

13. In this Agreement, "**Representatives**" of the Company means, collectively, the Company's directors, officers, employees, managers, agents, representatives, lawyers, accountants, consultants, and financial and other advisors, provided that such persons or entities shall only be considered Representatives if such persons or entities have received Province Confidential Information.

14. In this Agreement, "**Province Confidential Information**" means all information and material of, or relating to, the Province and its Representatives, whether in oral, written, graphic, electronic or any other form or medium, including without limitation information and material concerning the Province's past, present or future policy decisions, business, affairs, financial conditions, operations, plans, potential transactions or potential purchases or sales of shares of Hydro One Limited or other activities that is furnished to the Company or its Representatives pursuant to the Governance Agreement and/or the Registration Rights Agreement on or after the date of this Agreement in connection with the Purpose. For the purposes of this definition, "**Province Confidential Information**" includes the portion of any plans, proposals, reports, analyses, notes, compilations, studies, forecasts or other documents prepared by the Company or its

Representatives that are based on, contain, incorporate or otherwise reflect Province Confidential Information.

15. Notwithstanding Section 14, the following will not constitute "**Province Confidential Information**" under this Agreement:

(a) for the avoidance of doubt (i) information that the Company or its Representatives receive or obtain solely pursuant to any Applicable Law and (ii) information that the Company or its Representatives receive or obtain other than pursuant to the Governance Agreement and/or the Registration Rights Agreement.

(b) information that the Company or its Representatives receive or obtain from a third person who is not known by the Company to be prohibited from transmitting the information to the Company or its Representatives by a contractual, legal or fiduciary obligation not to disclose such information;

(c) information that has been publicly disclosed by the Province (including, for greater certainty, information publicly disclosed through regulatory filings or processes), or that is or becomes publicly available through no fault of the Company or its Representatives in breach of this Agreement or other contractual, legal or fiduciary obligation not to disclose such information;

(d) information that was independently developed by the Company or its Representatives without reference to the Province Confidential Information; and

(e) information that the Province agrees in writing is not Province Confidential Information for the purposes of this Agreement.

16. The Company acknowledges and agrees that the Province may not be able to furnish or disclose Personal Information to the Company or any of its Representatives unless consents to the disclosure of such Personal Information have been obtained from the relevant individual(s) as required, or the Province is otherwise authorized by Applicable Law to disclose such information. If any Personal Information is disclosed to the Company and/or its Representatives, the Company and its Representatives shall, subject to their obligations under Applicable Law, (i) use the Personal Information only in connection with the Purpose, (ii) limit disclosure of the Personal Information to what is authorized by the Province or required by Applicable Law, (iii) promptly refer any persons looking for access to their Personal Information to the Province, (iv) use appropriate security measures to protect the Personal Information, and (v) comply with Applicable Law relating to the privacy of the Personal Information.

17. The Company agrees that all Province Confidential Information shall be held and treated by the Company and its Representatives in confidence and shall not be disclosed by the Company or its Representatives in any manner whatsoever, in whole or in part, except as expressly provided in this Agreement, as required by Applicable Law or by the

requirements of any stock exchange on which securities of the Company are listed or with the Province's prior written consent.

18. The Company also agrees (i) to use the same means to protect the confidentiality of the Province Confidential Information that the Company would use to protect its own confidential and proprietary information (but in any event, no less than reasonable means), (ii) to disclose Province Confidential Information only to its Representatives who need to know the Province Confidential Information in connection with the Purpose, who are informed by the Company of the confidential nature of the Province Confidential Information and who agree to be bound by the terms of this Agreement, (iii) to take all necessary steps to require that its Representatives comply with and are bound by the terms and conditions of this Agreement, and (iv) to be responsible for any breach by its Representatives of any terms of this Agreement applicable to the Company's Representatives (as if the Company's Representatives were parties to and bound by those provisions of this Agreement). The provisions of clause (iv) of this Section 18 shall survive termination of this Agreement.

19. The Company acknowledges that certain of the Province Confidential Information that it receives or obtains may be Privileged Information. The Company acknowledges and agrees that access to the Privileged Information is not intended and should not be interpreted as a waiver of any privilege in respect of Privileged Information or of any right to assert or claim privilege in respect of Privileged Information. To the extent there is any waiver of privilege, it is intended to be a limited waiver in favour of the Company, solely for the purposes and on the terms set out in this Agreement.

20. In the event that the Company or any of its Representatives are required by the requirements of any stock exchange on which securities of the Company are listed, by Applicable Law, by oral questions, interrogatories, requests for information or documents, subpoena, criminal or civil investigative demand, legislative committee or officer, or similar process to disclose any Province Confidential Information, the Company or such Representative, as the case may be, shall, to the extent permitted by Applicable Law, provide the Province with prompt written notice of such requirement so that the Province may seek a protective order or other appropriate remedy, if available, or waive compliance with the provisions of this Agreement. The Company shall thereafter cooperate with the Province to prevent such disclosure (including cooperating in obtaining a protective order or other appropriate remedy). The parties acknowledge that the Company is subject to applicable securities law and the requirements of the Toronto Stock Exchange and New York Stock Exchange which mandate immediate disclosure of material information concerning the Company such that it may not always be practicable to provide prompt written notice of the requirement to disclose Province Confidential Information, to the extent Province Confidential Information would constitute material information concerning the Company. In the event the Province is unable to obtain a protective order or other remedy, the Company or such Representative, as the case may be, may disclose only that portion of the Province Confidential Information which the Company or such Representative is advised by counsel as being required to disclose by Applicable Law or the requirements of any stock exchange on which securities of the Company are listed. The Company or such Representative, as the case may be, shall use

reasonable efforts to obtain reliable assurance that confidential treatment will be afforded to any Province Confidential Information so disclosed. The parties acknowledge, however, that the Company cannot require any securities regulator or stock exchange who receives information to maintain such information in confidence. The provisions of this Section 20 shall survive termination of this Agreement.

21. The Province Confidential Information provided by the Province to the Company and/or its Representatives shall at all times remain the property of the Province or its Representatives, as applicable, and by making Province Confidential Information available to the Company, neither the Province nor its Representatives shall be deemed to be granting any license or other right under or with respect to any trade secret, patent, copyright, trademark, or other proprietary or intellectual property right. The provisions of this Section 21 shall survive termination of this Agreement.

General Provisions:

22. Each party acknowledges that it is aware (and that it will advise its respective Representatives) that applicable securities laws in Canada or elsewhere prohibit any person with material non-public information about an issuer (which would include both Hydro One Limited and Hydro One Inc.) from purchasing or selling securities of such issuer, or subject to certain limited exceptions, from communicating such information to any other person. The Province has instituted reasonable internal controls to restrict (a) the disclosure of material non-public information about the Company and (b) trading in the securities of the Company by the Province and its Representatives. The Province has provided a copy of such internal controls to Hydro One Limited and Hydro One Inc. on or prior to the date of this Agreement.

23. The parties acknowledge that any information that the Province receives pursuant to section 1.0.25 of the *Financial Administration Act* (Ontario) (the "**FAA**") shall be dealt with in accordance with the provisions of the FAA.

24. The Company agrees to notify the Province of any information requests made by the Auditor General of Ontario pursuant to its rights under the *Auditor General Act* (Ontario) in relation to the audit of the Public Accounts (prepared pursuant to the FAA) and to advise the Assistant Deputy Minister and Provincial Controller, Treasury Board Secretariat (or any successor office thereto) as soon as reasonably practicable of the anticipated timing and planned approach to meet such requests.

25. Except as otherwise specified in this Agreement, this Agreement shall terminate on the second anniversary of the last to occur of the following: (i) the Governance Agreement no longer being in effect; and (ii) the Registration Rights Agreement no longer being in effect. The obligations of the Company and the Province under this Agreement shall survive termination of this Agreement with respect to that Province Confidential Information and Company Confidential Information, as the case may be, that pertains to those matters identified by the Province or the Company, as the case may be, to the other in writing at the time of termination of this Agreement.

26. This Agreement may not be amended except with the written consent of all parties hereto. There are no understandings, representations, warranties, terms, conditions, undertakings or collateral or other agreements, express, implied or statutory, among the parties with respect to the subject matter of this Agreement other than as expressly set forth in this Agreement, the Governance Agreement and the Registration Rights Agreement. If any provision of this Agreement is held to be invalid or unenforceable in whole or in part, such invalidity or unenforceability shall not affect any other provision hereof and all other provisions hereof shall continue in full force and effect.

27. It is understood and agreed that no failure or delay in exercising any right, power or privilege hereunder shall operate as a waiver thereof, nor shall any single or partial exercise thereof preclude any other or further exercise thereof or the exercise of any other right, power or privilege hereunder. Nothing shall be construed or have the effect of a waiver except an instrument in writing signed by a duly authorized representative of the party which expressly waives any such right, power or privilege.

28. This Agreement will be governed by and construed in accordance with the laws of the Province of Ontario and the laws of Canada applicable therein.

29. This Agreement may be executed in counterparts, each of which will be deemed to be an original and both of which taken together will be deemed to constitute one and the same instrument. Delivery of an executed signature page to this Agreement by any party by electronic transmission will be as effective as delivery of a manually executed copy of the agreement by such party.

[Remainder of page intentionally left blank]

IN WITNESS WHEREOF the parties have executed this Agreement as of the date set forth above.

HYDRO ONE LIMITED

By: ______________________________

Name: Mayo Schmidt

Title: President and Chief Executive Officer

[Signature page to Confidentiality Agreement]

HER MAJESTY THE QUEEN IN RIGHT OF ONTARIO, AS REPRESENTED BY THE MINISTER OF ENERGY

By: ______________________________

Name: Bob Chiarelli

Title: Minister of Energy

SCHEDULE "C"

Hydro One Governance Standards

1. Skills Matrix
2. Board Diversity Policy
3. Majority Voting Policy
4. Stakeholder engagement policy
5. Corporate disclosure policy
6. Corporate governance guidelines
7. Mandate for the Hydro One Ombudsman
8. Mandates of the Board and its committees
9. Position descriptions for the CEO, the Chair, the Directors and the committee chairs
10. Code of business conduct
11. Whistleblower policy
12. Executive share ownership guidelines & anti-hedging policy
13. Compensation recoupment policy

SCHEDULE "D"

Rules of Procedure for Arbitration

The following rules and procedures shall apply with respect to any matter to be arbitrated by the Parties under the terms of the Agreement.

1. INITIATION OF ARBITRATION PROCEDURES

   (a) If a Party to this Agreement wishes to have any matter under this Agreement arbitrated, it shall give notice to the other Party specifying particulars of the matter or matters in dispute and request that ADR Chambers Canada appoint a single arbitrator who need not be a member of ADR Chambers Canada and who satisfies the requirements of Section 1(b) of this Schedule "D" (the "**Arbitrator**").

   (b) The individual selected as Arbitrator shall be reasonably qualified by education and/or experience to decide the matter in dispute.

2. SUBMISSION OF WRITTEN STATEMENTS

   (a) Within 15 Business Days of the appointment of the Arbitrator, the Party initiating the arbitration (the "**Claimant**") shall send the other Party (the "**Respondent**") a Notice of Arbitration setting out in sufficient detail the facts and any contentions of law on which it relies, and the relief that it claims.

   (b) Within 15 Business Days of the receipt of the Notice of Arbitration, the Respondent shall send the Claimant an Answer to the Notice of Arbitration stating in sufficient detail which of the facts and contentions of law in the Notice of Arbitration it admits or denies, on what grounds, and on what other facts and contentions of law he relies.

   (c) Within 15 Business Days of receipt of the Answer, the Claimant may send the Respondent a Reply.

   (d) Each Notice of Arbitration, Answer and Reply shall be accompanied by copies (or, if they are especially voluminous, lists) of all essential documents on which the Party concerned relies and which have not previously been submitted by any Party.

   (e) After submission of all the pleadings, the Arbitrator will give directions for the further conduct of the arbitration.

3. MEETINGS AND HEARINGS

   (a) The arbitration shall be heard in Toronto. Ontario or in such other place as the Claimant and the Respondent shall agree upon in writing. The arbitration shall be conducted in English unless otherwise agreed by the Parties and the Arbitrator.

Subject to any adjournments which the Arbitrator allows, the final hearing will be continued on successive working days until it is concluded.

(b) All meetings and hearings will be in private and shall be confidential unless the Parties otherwise agree.

(c) Any Party may be represented at any meetings or hearings by legal counsel

(d) Each Party may examine, cross-examine and re-examine, as appropriate, all witnesses at the arbitration.

4. THE DECISION

(a) The Arbitrator will make a decision in writing and, unless the Parties otherwise agree, will set out reasons for decision in the decision.

(b) The Arbitrator will deliver the decision to the Parties as soon as practicable after the conclusion of the final hearing, but in any event no later than 60 days thereafter, unless that time period is extended for a fixed period by the Arbitrator on written notice to each Party because of illness or other cause beyond the Arbitrator's control.

(c) The provisions of this Agreement and the Arbitration Rules requiring the determination of certain disputes of arbitration shall not operate to prevent recourse to the court by any Party as permitted by the *Arbitration Act*, 1991 (Ontario) with respect to injunctions, receiving orders and orders regarding the detention, preservation and inspection of property, or whenever enforcement of an award by the sole arbitrator reasonably requires access to any remedy which an arbitrator has no power to award or enforce, provided that any such recourse to the court and any remedy of the arbitrator shall, in the case of remedies against the Province, be subject to the *Proceeding Against the Crown Act* (Ontario). In all other respects an award by the Arbitrator shall be final and binding upon the Parties and there shall be no appeal from that award on any questions of fact, mixed law and fact, or law provided that the Arbitrator has followed the Arbitration Rules in good faith and has proceeded in accordance with the principles of natural justice.

5. JURISDICTION AND POWERS OF THE ARBITRATOR

(a) By submitting to arbitration under these Arbitration Rules, the Parties shall be taken to have conferred on the Arbitrator the following jurisdiction and powers, to be exercised at the Arbitrator's discretion subject only to these Arbitration Rules and the relevant law with the object of ensuring the just, expeditious, economical and final determination of the dispute referred to arbitration.

(b) Without limiting the jurisdiction of the Arbitrator at law, the Parties agree that the Arbitrator shall have jurisdiction to:

(i) determine any question of law arising in the arbitration;

(ii) determine any question as to the Arbitrator's jurisdiction;

(iii) determine any question of good faith, dishonesty or fraud arising in the dispute;

(iv) order any Party to provide further details of that Party's case, in fact or in law;

(v) proceed with the arbitration notwithstanding the failure or refusal of any Party to comply with these Arbitration Rules or with the Arbitrator's orders or directions, or to attend any meeting or hearing, but only after giving that party notice that the Arbitrator intends to do so;

(vi) receive and take into account such written or oral evidence tendered by the Parties as the Arbitrator determines is relevant, whether or not strictly admissible in law;

(vii) make one or more interim awards;

(viii) hold meetings and hearings, and make a decision (including a final decision) in Ontario (or elsewhere with the concurrence of the Parties thereto);

(ix) order the Parties to produce to the Arbitrator, and to each other for inspection, and to supply copies of, any documents, except privileged documents, or classes of documents in their possession or power which the Arbitrator determines to be relevant;

(x) order the preservation, storage, sale or other disposal of any property or thing under the control of any of the Parties;

(xi) make interim orders to secure all or part of any amount in dispute in the arbitration;

(xii) make any order as to the payment of costs of the arbitration, including legal fees on a solicitor and client basis;

(xiii) include, as part of any award, the payment of interest at the rate determined by the Arbitrator from an appropriate date as determined by the Arbitrator; and

(xiv) make any other order that the Arbitrator determines is just and reasonable in determining the matters in dispute.

6. ARBITRATION ACT, 1991

The rules and procedures of the *Arbitration Act*, 1991 (Ontario) shall apply to any arbitration conducted hereunder except to the extent that they are modified by the express provisions of these Arbitration Rules.

Building Owners and Managers Association (BOMA) INTERROGATORY #007

Reference:

Exhibit A, Tab 5, Schedule 1, Page 5, Lines 10-11

Interrogatory:

Please provide a copy and description of the systems, processes, and models, provided for the isolation of costs related to transmission work. Please show clearly the allocation of each type/category of costs as between transmission and distribution for the test year.

Response:

Please see Exhibit B1, Tab 3, Schedule 9 and its attachment for Hydro One's Common Asset Allocation and the review of the allocation methodology done by Black & Veatch. Common Corporate cost allocation methodology is described in Exhibit C1, Tab 6 Schedule 1 and the review done by Black & Veatch can be found in Attachment 1 of that exhibit.

Building Owners and Managers Association (BOMA) INTERROGATORY #008

Reference:

Exhibit A, Tab 5, Schedule 1, Page 2

Interrogatory:

(a) Please confirm that HONI, Hydro One Inc., and Hydro One Limited have the same senior management team. If not, or if there are exceptions, please provide details of the senior management team of each.

(b) Please describe each step in the transaction which effected the transfer of the shares of Hydro One Brampton to Hydro One Inc. (a company wholly owned by the Province of Ontario), including any consideration, if any, paid by the Province of Ontario for such shares.

Response:

(a) HONI, Hydro One Inc. and Hydro One Limited share the same senior management team.

(b) The information requested is not relevant to Hydro One's current application, as it pertains to costs and activities undertaken by its shareholder outside of Hydro One's regulated transmission business.

Witness: Michael Vels

Building Owners and Managers Association (BOMA) INTERROGATORY #009

Reference:

Exhibit A, Tab 5, Schedule 2, Page 3

Interrogatory:

Please explain why HONI does not have a separate Board committee for First Nations matters.

Response:

HONI's Board of Directors consists of the same members as those on Hydro One Limited's (HOL) Board. One of the four committees of the HOL Board is the Health, Safety, Environment and First Nations & Metis Committee which oversees all of Hydro One's relationship with First Nations and Metis communities and Hydro One's implementation of the First Nations and Metis relations policy, and this includes HONI's relationship with same.

Building Owners and Managers Association (BOMA) INTERROGATORY #010

Reference:
Exhibit A, Tab 5, Schedule 2, Page 12

Interrogatory:
Please provide a copy of the annual risk assessment document.

Response:
Attached please see the 2015 annual risk assessment document.

Witness: Michael Vels

Asset Deployment

Risk Assessment Workshop

Hydro One Networks

November 3, 2015

Risk Management Group

Hydro One Networks Inc.

WORKSHOP DETAILS

Project Asset Deployment

Invitees:

Kathleen McCorriston
Alex Jackson
Ryan Lee
Jason MacDermott
Joe Ly
Andy Stenning
Mike Boland
Fred Vanderbeek
Tom Meta
Michael Fraser
Travis Iwamoto
James Mardegan
Brad Bowness
Andrew Spencer
Alex Turpin
Chris Cooper
Tom Irvine
Randy Church
Rob Berardi
Kyle Higgins
Bruno Jesus
Jeff Schaller

Facilitators:

Frank D'Andrea

Maja Shkolnik

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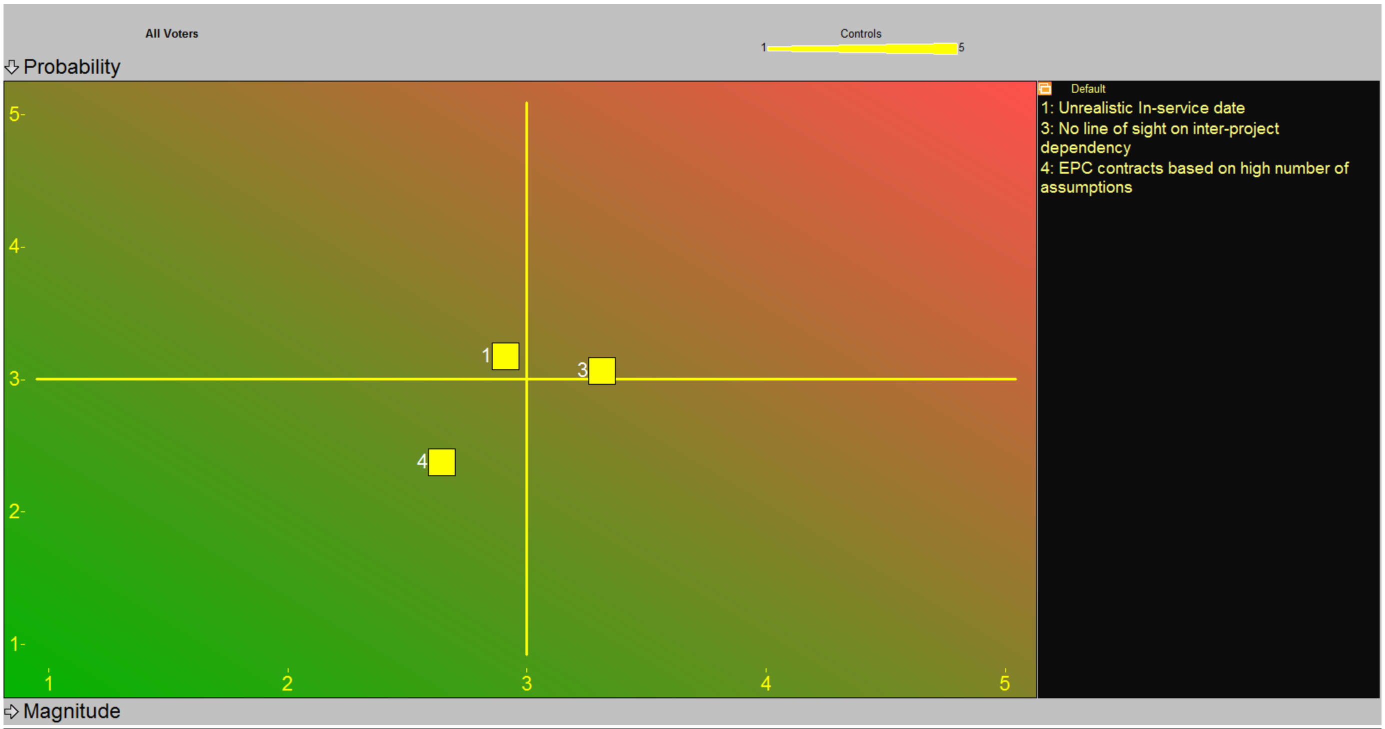
Risks **Page**

Risk Map


All Voters
Controls
1
5
Probability
5-
4-
3-
2-
1-
1
2
3
4
5
1
3
4
Magnitude
Default
1: Unrealistic In-service date
3: No line of sight on inter-project dependency
4: EPC contracts based on high number of assumptions

Unrealistic In-service date

Description: *Committed in-service date not aligned with the execution schedule; project gets in service late; Cost/productivity risk (outage planning); capital and deployment of the assets - in-service not clearly identified and other pushed ahead - other lobs works gets kicked out to accommodate the in-service date*

Scenarios
• Customer jobs – lack of delivery to customer in timely manner • Projects require many parties to work in sequence to deliver. in case of delay, we don't not make adjustments to I/S date • When delay is identified, we don't assess/change I/S date(we focus on trying to get to it) • We don't have the tough conversations to change the date • I/S date set without enough information (prematurely) • I/S date set based on the outage plan – can't change it as it may cause cascading effect with planned outages • Significantly back end loaded with end of year I/S dates (need to hit Dec 31st OEB target),

Magnitude & Probability
• (4) SV – credibility w regulator (loss of), • (3) percentage of work program completed • (2) historically – I/S date impact has not been severe (not ideal) • (2) productivity • We get the work program completed at the expense of productivity (sacrificing 5%) • (2) the plan is aggressive at start (not realistic)

- The plan contains work that cannot be completed cost efficiently (1B vs. 750M)
- (3) we've made a step change – worst credible -70%-84% I/S capital completed
- (3) productivity issues (efficiency)
- Prioritization - sacrifice efficiency in order to complete jobs (we focus on people completing work, not work planning how to get work done)
- We're not early enough in planning (3 years ideal) to set realistic I/S dates, schedules not created with enough slack time
- (3) safety, jamming too much work can lead to increase in injuries (a lot of emphasis on delivering the I/S date)
- We're focused on top projects in execution, smaller project get lost
- Individual projects have realistic I/S dates – not integrated/coordinated into work program well

If it's happening today – it's very likely it will happen in the next 5 years (productivity)

4 – likely chance of impacting productivity

3 – 1 in 10 chance

	Magnitude	Controls	Probability	Risk Score	Tolerable Risk?
Risk Rating	2.9	2.6	3.2	3.05	No

Controls	
In Place:	**Gaps/Needs:**
• Work released earlier • Plans / actions to address the process (AD) • Regular project (options) reviews • Customer contracts (with more comfort level) • Individual projects have realistic I/S dates (in isolation) – not achievable when integrated into work program • Asset Deployment process initiative	- no flexibility to move I/S date target - number of initiatives on the way to address the existing issues (WIP) – not completed yet (in progress) – expectations need to be set - results will be seen in 3 years - controls we have in plans are not used - limited controls around Quality / efficiencies when focused on getting the work done - upfront conversations needed (realistic plans) - initial date based on high level information (ends up being committed date) – no opportunity to go back and change it ("culturally we believe the date is unchangeable") - urgent projects take priority over long term plans - the plans in place have to be completed / put in place

Initiatives		
Description	**Responsible**	**Due**
• Preliminary Engineering and Estimating Process Initiative	Michael Fraser/ James Mardegan /Kathleen McCorriston	Ongoing (year end 2015
• Construction Services Integrated Scheduling tool	Kathleen McCorriston	June 2016

Poor Outage Planning – discussed together with "No line of sight on inter-project dependency"

Description: *Cannot meet outage plans/in-service; what was planned is not executed; Risk of not achieving the investment plan; need to be 3 years out in planning - and anchor outage planning needs*

Scenarios
• X

Magnitude & Probability					
•					
	Magnitude	Controls	Probability	Risk Score	Tolerable Risk?
Risk Rating					

Controls	
In Place:	**Gaps/Needs:** -

Initiatives		
Description	**Responsible**	**Due**
• x		

No line of sight on inter-project dependency / Poor Outage Planning

Description: *Project managers focused on single projects; project managers don't have line of sight on other projects going on; Development and sustainment projects not identifying project needs/overlaps*

Scenarios
• ex. Hawthorne – conflict between sustainment and development – pushing I/S date out • missing data (and lack of transparency) in the accomplishment file – inability to see if work is done • project collisions, delays, missing I/S dates due to lack of visibility • downstream impact • resource pool / switching / jurisdictional (union) issues • preventative maintenance work on something that will be replaced in near future (5 years) • outage requirements not visible (when multiple projects require outages at the same location) • commitments being made on a high level • project collision visible at work release stage / too late in the process to change I/S date • planning process in place on project level (in isolation), not program level • moving to more sustainment work (with more variables / many unknowns) • poor information that the outage (staging) plan is based on • outage planners have no visibility to downstream impact a cancel outage may have • staging plans required (from EN) in order to define the outage plans • domino effect due to lack of buffer in the outage plan (cancelled outage early on impacts the rest of the plan) • the market place has determined the outage plans with anything that leaves Ontario need to be planned 18 months in advance

Magnitude & Probability					
• (5) safety – putting people in dangerous situations (only through training and luck that we are getting by to date), can't achieve the work plan we have put in front of the OEB (loss of credibility) • (4) productivity, we're at 6-10% today and there is an upside – opportunity to get better • (4) Media – provincial media attention • (2) to date we have managed the impact • Long lead plans required for anything leaving the province will need to be scheduled 18 months ahead • We're able to complete the program at cost (peril) to productivity Unlikely - Worst credible scenarios do happen, however not often (ex, Allanburg, Hawthorne) Highly visible projects we're good at, the smaller ones we're not that good at Likely – 2/3 of or projects are either under or over budget					
	Magnitude	Controls	Probability	Risk Score	Tolerable Risk?
Risk Rating	3.3	2.7	3.1	3.2	no

<table>
<tr><th colspan="2">Controls</th></tr>
<tr><td>In Place:
group in place with visibility to entire work program
work accomplishment file
station centric model (single location)
TSOG process
Very strong network of knowledgeable people (superhuman effort)</td><td>Gaps/Needs:
- Not enough information when planning decisions are made prior to work release
- Lack of information upfront (and scheduling tool)
- Outage planning on the system is not widely understood
- upfront / contingency planning not done upfront
- no buffer throughout each stage of the outage plan
- lack of interdependencies visibility
- development / sustainment lack of integration
- regional planning group (team) looking at planning needs based on geographic location</td></tr>
</table>

Initiatives

Description	Responsible	Due
• In the accomplishment plan - functional location list visibility • Accomplishment plan review (accuracy)	Randy	tbd
• Construction Services Integrated Scheduling tool	Kathleen McCorriston	June 2016
• scheduling tool for stations	Mike Boland	tbd
• Enterprise wide visibility tool, more upfront visibility (sustainment and development), line of sight to ex. resource requirements outages	Tbd	

Outsourcing (EPC) contracts based on high number of assumptions

Description: *Poor upfront scope - or changes to scope - increasing the costs of EPC contracts; EPC ability to procure to our spec - quality concern - do they have the QA to ensure they can deliver upon requirements, note … add #5 comment*

Scenarios
• at the moment we're exploring only one (lump sum) model, financial risk • safety – different work procedures between HONI and constructor (both recognized by the ministry of labour), equivalent, but different practices • burn on resources due to lack understanding on standards, practices – work needs to be done by our staff due to misunderstanding (rework) • HONI resources required for rework due to work not being completed to our (undocumented expectations) • lack of engineering review during the contract execution • lack of time due to pressure of I/Servicing causes us to have to complete the rework rather than the contractor • undocumented practices internally – not passed down to the contractors, work does not get completed to our expectations – resulting in rework / more maintenance • contractors lack the understanding of HONI practices – can't complete the work without extensive hand holding resulting in HONI fix ups • projects delivered / completed with increased maintenance needs • contractor subcontracts work to companies not on HONI's preferred list (ex. EN companies we would not use) • scoping / information changing in-plan requiring quick deadlines to EPC • lack of upfront information to make decisions regarding work execution (EPC / in-house)

Magnitude & Probability
• Reliability impact when contractors use equipment with lesser life expectancy • (1) we spend a lot of time managing EPC – making it difficult for them to fail • (4) large impact on EN resources (especially when the project comes back and in-plan work gets pushed off), • (3) productivity impacts • (2) negligible financial impact, impact to productivity (lost opportunities) 3 - program will get bigger, expectations higher 2 – committed controls will fill in the gap, resulting in more efficient process

	Magnitude	Controls	Probability	Risk Score	Tolerable Risk?
Risk Rating	2.6	2.6	2.4	2.5	yes

Controls

In Place:	**Gaps/Needs:**
• Looking at different outsourcing models • Enforcement • Scoping • Benchmarking initiative • RFP – firm to help out with the EPC process • RFP – outsourcing partner • Dedicated group focused on EPC • Fully competitive tendering process • Delivering projects within project timelines • Site inspections	- We use the excuse that we're not good at it in order not to do it - Gap between management / worker level – resulting in resistance and barriers to EPC - Lack of process documentation (on helping out the contractors) - Immature in our ability to manage (EPC) contract - Information not available in time to plan properly - Need better contract/procurement package

Initiatives		
Description	**Responsible**	**Due**
• Committed initiatives listed under controls above		

Inefficient or unclear resource planning – discussed with "Outsourcing (EPC) contracts based on high number of assumptions"

Description: *Poor upfront planning results in not identifying required resources in a timely manner; Indecisive in work execution strategy: supply chain ability to get contractor in time for work; due to changing strategies - EPC or HONI (Ex. Aylmer and Overbrook)*

Scenarios
• X

Magnitude & Probability					
• x					
	Magnitude	Controls	Probability	Risk Score	Tolerable Risk?
Risk Rating					

Controls	
In Place:	**Gaps/Needs:** -

Initiatives		
Description	**Responsible**	**Due**
• x		

LOB Misalignment – not discussed

Description: *Lack of alignment in LOBs meeting workflow stages of the project (Ex. supply invoices, labour); Ex. customer commitment to financial close out within 180 day but there's a lack of commitment on supplier invoices; Ex. before project release and after project execution - (Eng. and project mgmt.) - misalignment in team understanding of requirements - risk of not meeting in-service.*

Scenarios
• x

Magnitude & Probability					
• x					
	Magnitude	Controls	Probability	Risk Score	Tolerable Risk?
Risk Rating					

Controls	
In Place:	**Gaps/Needs:** -

Initiatives		
Description	**Responsible**	**Due**
• x		

Summary of Initiatives

Risk	Initiative	Responsible	Due
Unrealistic In-service date	Preliminary Engineering and Estimating Process Initiative	J. Mardegan /K. McCorriston	On going
	Construction Services Integrated Scheduling tool	K. McCorriston	June 2016
No line of sight on inter-project dependency / Poor Outage Planning	In the accomplishment plan - functional location list visibility Accomplishment plan review (accuracy)	Randy Church	Tbd
	Construction Services Integrated Scheduling tool	K. McCorriston	June 2016
	Scheduling tool for stations	Mike Boland	tbd
	Enterprise wide visibility tool, more upfront visibility (sustainment and development), line of sight to ex. resource requirements outages	Tbd	
Outsourcing (EPC) contracts based on high number of assumptions	Looking at different outsourcing models Benchmarking initiative		

Risk Universe

Asset Deployment
Risk Universe

Risk Registry

Risk Registry - Asset
Deployment.xlsx

Building Owners and Managers Association (BOMA) INTERROGATORY #011

Reference:

Exhibit A, Tab 5, Schedule 2, Page 13

Interrogatory:

Please provide a copy of the Inergi Outsourcing Agreement.

Response:

Please find attached a confidential copy of the requested agreement. Hydro One has redacted all terms and conditions specifically relating to Customer Service Operations, as these services are not provided to Hydro One's transmission business and are therefore beyond the scope of Hydro One's current application. Also redacted is information that is sensitive from a security viewpoint (e.g. server names, addresses, etc.). If this information were to be disclosed to the public, there is significant risk that individuals or organizations could use the information to the detriment of Hydro One and Inergi.

Witness: Gary Schneider

Building Owners and Managers Association (BOMA) INTERROGATORY #011

Hydro One has filed in confidence with the OEB a copy of its agreement with Inergi LP, which is described in Exhibit C1, Tab 3, Schedule 2. The document contains terms and conditions defining the scope of services, compensation payable to Inergi for performing the services, the governance structure and protocol applicable to the arrangement, and the allocation of risk and responsibility between the parties for various related matters.

Building Owners and Managers Association (BOMA) INTERROGATORY #012

Reference:

Exhibit A, Tab 5, Schedule 2, Page 15

Interrogatory:

Please provide a copy of most recent confirmation/study by Inergi on the integrity of financial controls of all HONI transactions.

Response:

Attachment 1 and 2 are Inergi's Service Organization Control Type II audit reports: Business Process Outsourcing and Information Technology Outsourcing Reports. In the latest 12 months ended May 31, 2016, both reports received a standard unqualified opinion.

Witness: Gary Schneider

Capgemini Business Process Outsourcing – Inergi LP

Report on Management's Description of its Service Organization's Internal Control System and on the Suitability of the Design and Operating Effectiveness of Controls

For the period June 1, 2015 to May 31, 2016

Table of Contents

Section I

I. Independent Service Auditors Report

To the Management of Inergi LP:

Scope

We have examined Inergi LP's ("Inergi") description of their business process outsourcing ("BPO") systems to support Inergi's client's Electricity Transmission and Distribution services throughout the period June 1, 2015 to May 31, 2016 (the "description") and the suitability of the design and operating effectiveness of Inergi's controls to achieve the related control objectives stated in the description. The description indicates that certain control objectives specified in the description can be achieved only if complementary user entity controls contemplated in the design of Inergi's controls are suitably designed and operating effectively, along with related controls at the service organization. We have not evaluated the suitability of the design or operating effectiveness of such complementary user entity controls.

Service Organization's Responsibilities

In Section II, Inergi has provided an assertion about the fairness of the presentation of the description and suitability of the design and operating effectiveness of the controls to achieve the related control objectives stated in the description. Inergi is responsible for preparing the description and for the assertion, including the completeness, accuracy, and method of presentation of the description and the assertion, providing the services covered by the description, specifying the control objectives and stating them in the description, identifying the risks that threaten the achievement of the control objectives, selecting the criteria, and designing, implementing, and documenting controls to achieve the related control objectives stated in the description.

Service Auditor's Responsibilities

Our responsibility is to express an opinion on the fairness of the presentation of the description and on the suitability of the design and operating effectiveness of the controls to achieve the related control objectives stated in the description, based on our examination.

We conducted our examination in accordance with AT Section 801, *Reporting on Controls at a Service Organization*, established by the American Institute of Certified Public Accountants and International Standard on Assurance Engagements (ISAE) 3402, *Assurance Reports on Controls at a Service Organization*, issued by the International Auditing and Assurance Standards Board.

PricewaterhouseCoopers LLP
PwC Tower, 18 York Street, Suite 2600, Toronto, Ontario, Canada M5J 0B2
T: +1 416 863 1133, F: +1 416 814 3215, www.pwc.com/ca

Those standards require that we comply with ethical requirements and plan and perform our examination to obtain reasonable assurance about whether, in all material respects, the description is fairly presented and the controls were suitably designed and operating effectively to achieve the related control objectives stated in the description throughout the period June 1, 2015 to May 31, 2016.

An examination of a description of a service organization's system and the suitability of the design and operating effectiveness of the service organization's controls to achieve the related control objectives stated in the description involves performing procedures to obtain evidence about the fairness of the presentation of the description and the suitability of the design and operating effectiveness of those controls to achieve the related control objectives stated in the description. Our procedures included assessing the risks that the description is not fairly presented and that the controls were not suitably designed or operating effectively to achieve the related control objectives stated in the description. Our procedures also included testing the operating effectiveness of those controls that we consider necessary to provide reasonable assurance that the related control objectives stated in the description were achieved. An examination engagement of this type also includes evaluating the overall presentation of the description and the suitability of the control objectives stated therein, and the suitability of the criteria specified by the service organization and described in management's assertion in Section II. We believe that the evidence we obtained is sufficient and appropriate to provide a reasonable basis for our opinion.

Inherent Limitations

Because of their nature, controls at a service organization may not prevent, or detect and correct, all errors or omissions in processing or reporting transactions. Also, the projection to the future of any evaluation of the fairness of the presentation of the description, or conclusions about the suitability of the design or operating effectiveness of the controls to achieve the related control objectives is subject to the risk that controls at a service organization may become inadequate or fail.

Other Information Provided by the Service Organization

The information included in Section V, "Other Information Provided by Inergi", and section VI, "Glossary of Terms" is presented by management of Inergi to provide additional information and is not a part of Inergi's description of its BPO system made available to user entities during the period June 1, 2015 to May 31, 2016**.** Information about Inergi's responses to identified exceptions, business continuity planning and disaster recovery has not been subjected to the procedures applied in the examination of the description of the BPO system and of the suitability of the design and operating effectiveness of controls to achieve the related control objectives stated in the description of the BPO system and accordingly, we express no opinion on it.

Independence and Quality Control

We have complied with the independence and other ethical requirements of the Code of Ethics for Professional Accountants issued by the International Ethics Standards Board for Accountants, which is founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behaviour.

Our firm applies International Standard on Quality Control 1 and accordingly maintains a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

Opinion

In our opinion, in all material respects, based on the criteria described in Inergi's assertion in Section II:

a. the description fairly presents Inergi's business process outsourcing system that were designed and implemented throughout the period June 1, 2015 to May 31, 2016.

b. the controls related to the control objectives of Inergi stated in the description were suitably designed to provide reasonable assurance that the control objectives would be achieved if the controls operated effectively throughout the period June 1, 2015 to May 31, 2016 and user entities applied the complementary user entity controls contemplated in the design of Inergi's controls throughout the period June 1, 2015 to May 31, 2016.

c. the controls of Inergi tested, which together with the complementary user entity controls referred to in Section II of this report, if operating effectively, were those necessary to provide reasonable assurance that the control objectives stated in the description were achieved, operated effectively throughout the period June 1, 2015 to May 31, 2016.

Description of Tests of Controls

The specific controls tested and the nature, timing, and results of those tests are listed in Section IV.

Intended Users and Purpose

This report, including the description of tests of controls and results thereof in Section IV, is intended solely for the information and use of Inergi, user entities of Inergi's business process outsourcing system during some or all of the period June 1, 2015 to May 31, 2016, and the independent auditors of such user entities, who have a sufficient understanding to consider it, along with other information including information about controls implemented by user entities themselves, when assessing the risks of material misstatements of user entities' financial statements. This report is not intended to be and should not be used by anyone other than these specified parties. If report recipients are not user organizations that have contracted for services with Capgemini for the period specified above or their independent auditors (herein referred to as a "non-specified user") and have obtained this report, or have access to it, use of this report is the non-specified user's sole responsibility and at the non-specified user's sole and exclusive risk. Non-specified users may not rely on this report and do not acquire any rights against PricewaterhouseCoopers LLP as a result of such access. Further, PricewaterhouseCoopers LLP does not assume any duties or obligations to any non-specified user who obtains this report and/or has access to it.

PricewaterhouseCoopers LLP

Toronto, Ontario
July 18, 2016

Section II

II. Inergi LP's Management Assertion

We have prepared the description of Inergi LP's ("Inergi") business process outsourcing ("BPO") system of controls ("system") for user entities of the BPO services during some or all of the period June 1, 2015 to May 31, 2016, and their user auditors who have a sufficient understanding to consider it, along with other information, including information about controls implemented by user entities of the system themselves, when assessing the risks of material misstatements of user entities' financial statements. We confirm, to the best of our knowledge and belief, that:

a. The description fairly presents the BPO system made available to user entities of the system during some or all of the period June 1, 2015 to May 31, 2016, for processing their transactions. The description indicates that certain control objectives specified in the description can be achieved only if complementary user entity controls contemplated in the design of Inergi's controls are suitably designed and operating effectively, along with related controls at Inergi. Section III and IV present Inergi's control objectives and related controls. The criteria we used in making our assertion were that the description:

   i. Presents how the system made available to user entities of the BPO system was designed and implemented to process relevant transactions, including:

      (1) The types of system provided including, as appropriate, the classes of transactions processed.
      (2) The procedures, within both automated and manual procedures, by which services are provided, including, as appropriate, procedures by which transactions are initiated, authorized, recorded, processed, corrected as necessary, and transferred to reports and other information prepared for user entities.
      (3) The related accounting records, supporting information, and specific accounts that are used to initiate, authorize, record, process, and report transactions; this includes the correction of incorrect information and how information is transferred to the reports and other information prepared for user entities.
      (4) How the system captures significant events and conditions, other than transactions.
      (5) The process used to prepare reports and other information for user entities.
      (6) The specified control objectives and controls designed to achieve those objectives, including as applicable, complementary user entity controls contemplated in the design of Inergi's controls.
      (7) Other aspects of our control environment, risk assessment process, information and communication systems (including related business processes), control activities, and monitoring controls that are relevant to processing and reporting transactions of user entities of the BPO system.

   ii. Does not omit or distort information relevant to the scope of the BPO system, while acknowledging that the description is presented to meet the common needs of a broad range of user entities of the system and their financial statement auditors, and may not, therefore, include every aspect of the BPO system that each individual user entity of the system and its auditor may consider important in its own particular environment.

b. The description includes relevant details of the changes to the BPO system during the period covered by the description.

c. The controls related to the control objectives stated in the description, which together with the complementary user entity controls referred to above, if operating effectively, were suitably designed and operating effectively throughout the period June 1, 2015 to May 31, 2016, to achieve those control objectives. The criteria we used in making this assertion were that:

   i. The risks that threaten the achievement of the control objectives stated in the description have been identified by management;

   ii. The controls identified in the description would, if operating as described provide reasonable assurance that those risks would not prevent the control objectives stated in the description from being achieved; and

   iii. The controls were consistently applied as designed and manual controls were applied by individuals who have the appropriate competence and authority.

Management of Inergi LP

Section III

III. Inergi LP's Management Description of Business Process Outsourcing Controls

Scope of Report

This report describes the controls of Inergi LP (Inergi) as related to its business processing outsourcing (BPO) system of controls (system). Inergi together with New Horizons Systems Solutions Inc., comprise the Toronto Service Delivery Centre (TSDC) and are wholly owned by Cap Gemini S.A. (Capgemini). Inergi is located in Toronto, Ontario. This report is designed to provide information for use by Inergi's client and its independent auditors who audit Inergi's client's financial statements. This document was prepared according to AT Section 801, *Reporting on Controls at a Service Organization*, established by the American Institute of Certified Public Accountants and the International Standard on Assurance Engagements 3402, *Assurance Reports on Controls at a Service Organization* issued by the International Auditing and Assurance Standards Board (ISAE 3402).

Inergi was formed March 1, 2002 to perform Business Process Outsourcing (BPO) and IT Outsourcing (Applications Management and Infrastructure Management) for the energy industry and other commercial clients. The controls described in this report are delivered directly by Inergi.

Controls related to Information Technology Outsourcing (ITO) services provided by TSDC-IT are subject to a separate report by PricewaterhouseCoopers. The results of the audit of key IT controls are reported separately to Inergi's client in a separate report, which should be read together with this report.

The scope of this audit is limited to the system provided by Inergi. The following BPO process overview depicts the process map that encompasses all of the BPO system performed or managed by Inergi to support Inergi's client. Within Inergi's process review, the process components retained by Inergi's client and performed by Inergi are separately identified. In the case of Decision Support, although certain elements are performed by Inergi, these are out of scope as they are deemed not relevant for this report's purposes.

Net metering is out of scope of this report. Net metering is the process whereby customers who have installed Renewable Energy Technology (RET) generate their own power from renewable sources such as wind, water, solar power and agricultural biomass, up to a capacity of 500kW, and send any excess electricity back to the grid for credit.

BPO Process Overview

Section I of this Report (the Report) contains the independent report of PricewaterhouseCoopers LLP ("PwC") in accordance with AT Section 801, *Reporting on Controls at a Service Organization* established by the American Institute of Certified Public Accountants and the International Standard on Assurance Engagements 3402 *Assurance Reports on Controls at a Service Organization* issued by the International Auditing and Assurance Standards Board (ISAE 3402). Section II provides Inergi's Management Assertion. Section III provides a description of the Business Process Outsourcing Controls of Inergi and the Complementary User Entity Controls. Section IV details Control Objectives, Control Activities and Tests of Operating Effectiveness. Section V presents additional information provided by Capgemini that addresses Disaster Recovery, Business Continuity Planning and management responses to exceptions noted. Section VI is a glossary of relevant terms used throughout the report.

The information in Section III is presented by Inergi to provide a description of Inergi's business operations and, while some information may refer to specific controls in place within the organization, not all of this information is contained within Inergi's description of controls (Section IV) that may be relevant to a user organization's internal control. As noted in Section IV, "Information Provided by the Independent Auditor", information contained in Section III may not have been subjected to the procedures applied in the examination of the description of the controls applicable to the processing of transactions for user organizations.

The requirement for Inergi to comply with certain controls has been exempted on instruction from Inergi's client. The exempted controls are within control objective 1.

Note that the description of controls in Section III are described in the current state, whereas in Section IV the controls are described in both the current and prior (end dated) states, if applicable.

Who We Are

For over 45 years, Cap Gemini S.A. (Capgemini) has helped companies around the globe address their business and IT issues through its Consulting, Technology and Outsourcing services. Capgemini employs approximately 143,650 people in over 40 countries working with customers across diverse industries. Global revenue for 2014 was reported at 10.573 billion Euros.

How We Do Business

Capgemini, one of the world's foremost providers of Consulting, Technology and Outsourcing services, has a unique way of working with its customers called the Collaborative Business Experience. The Collaborative Business Experience is designed to help our customers achieve better, faster, more sustainable results through seamless access to the Capgemini network of world-leading technology partners and collaboration-focused methods and tools. Through commitment to mutual success and the achievement of tangible value, Capgemini helps businesses implement growth strategies, leverage technology, and thrive through the power of collaboration.

For its customers, both local and international, Capgemini offers a complete range of services organized around four disciplines:

Consulting Services (Transformation / Process)

The mission of Consulting Services is to contribute to the business transformation and economic performance improvement of organizations, based on in-depth knowledge of their industries and processes. Consulting Services may be broken down into Process Consulting, which includes Customer Relationship Management (CRM), Supply Chain Management and Finance and Employee Transformation and Transformation Consulting, which provides assistance to top executives in identifying, shaping and delivering major change programs within their organizations.

Project Services (Architecture / System Development & Integration / Infrastructure)

Technology services evolve around the design and integration of technological solutions, innovation, and the transformation of technical infrastructures and are allied with consulting services in those cases where upgrading and transforming IT systems are linked to the customers' organization priorities. The Technology discipline covers three types of service: those related to systems architecture, those related to infrastructure (management and optimization of systems, networks and data), and those related to systems integration and applications development.

Outsourcing Services (IT and Business Systems and Processes)

Outsourcing Services involve taking charge of all or part of the management of a customer's IT resources and, sometimes, of completely overhauling the system (known as transformational outsourcing). In each case, it means optimizing the cost / performance ratio by tapping into Inergi's systems management and business process improvement expertise.

Outsourcing includes three categories of service offerings: Applications Management (AM), Infrastructure Management, and Business Process Outsourcing (BPO)

Local Professional Services (Sogeti)

These services are designed to support the internal capabilities of IT departments by providing the best experts to exercise their skills in the shortest possible time frames. United under the Sogeti label since January 1, 2002, these local professional services cover the development of specific software solutions, on-site applications management and hardware and network management. The acquisition of Transiciel at the end of 2003 considerably boosted Sogeti's position in Europe, where local professional services represent 20 percent of all IT expenditures.

Capgemini has created an original concept known as Rightshore™. Customers are provided with a specifically designed combination of quality, cost and delivery options through a network of worldwide centers.

Capgemini has also developed alliances with the top global technology leaders, as well as local players, to form a unique ecosystem that better serves its customers.

Capgemini is organized around six Strategic Business Units as follows:

1. Application Services One;
2. Application Services Two;
3. Infrastructure Services;
4. Business Process Outsourcing;
5. Capgemini Consulting; and
6. Local Professional Services (Sogeti).

Capgemini's industry experience combines the knowledge of its people, industry-specific thought leaders and specialized teams of seasoned professionals organized within the following sectors:

1. Financial Services;
2. Energy, Utilities & Chemicals;
3. Consumer Products, Retail, Distribution and Transportation;
4. Manufacturing;
5. Public; and
6. Telecom, Media and Entertainment.

Businesses and Organization

This report describes the controls of Inergi performed in Toronto, Ontario, Canada. Inergi provides Customer Care, Supply Chain, Finance and Accounting, Human Resources and Revenue Management to the energy utility industry. Inergi was formed to serve the energy utility industry and has established this business process outsourcing delivery centre to service with its first key account, Inergi's client.

The number of individuals in Inergi assigned to service Inergi's client account is approximately 550.

Capgemini Financial Statements

The consolidated financial statements of the corporation are audited annually by PricewaterhouseCoopers and KPMG S.A., independent auditors. An unqualified opinion was issued on the financial statements for the year ending December 31, 2015.

COSO (2013) Framework

Capgemini has defined Internal Controls based upon the "COSO" framework (Committee of Sponsoring Organizations of the Treadway Commission). The 'COSO Internal Control – Integrated Framework (2013)', adopted by Capgemini and Inergi is used in design and analysis of internal controls and for presentation in this report.

The Committee of Sponsoring Organizations of the Treadway Commission was formed to sponsor the National Commission on Fraudulent Financial Reporting, an independent private sector initiative which studied the causal factors that can lead to fraudulent financial reporting and developed recommendations for public companies and their independent auditors, for the Securities and Exchange Commission and other regulators and for educational institutions. In 2013, it published an updated 'Internal Control – Integrated Framework' which presents a comprehensive model and objectives for corporate internal control.

The components are:

A. Control Environment
B. Risk Assessment

C. Control Activities
D. Information and Communication
E. Monitoring Activities

There is synergy and linkage among these components, forming an integrated system that reacts dynamically to changing conditions. The internal control system is intertwined with the entity's operating activities and exists for fundamental business reasons. Internal controls are built into the entity's infrastructure and are an integral part of the organization.

A. Control Environment

The control environment is the set of standards, processes, and structures that provide the basis for applying internal controls across the organization. The Board of Directors and senior management establish the tone at the top regarding the importance of internal control including expected standards of conduct. Management reinforces expectations at the various levels of the organization. The control environment comprises the integrity and ethical values of the organization; the parameters enabling the board of directors to carry out its governance oversight responsibilities; the organizational structure and assignment of authority and responsibility; the process for attracting, developing, and retaining competent individuals; and the rigor around performance measures, incentives, and rewards to drive accountability for performance. The resulting control environment has a pervasive impact on the overall system of internal control.

As a multi-national player in the consulting, technology and outsourcing markets, the Capgemini Group (the "Group") was built from a complex amalgam of businesses, skills, cultures and individuals. Bringing together these parts into a successful, coherent whole requires the support of a range of commonly adopted principles, values, policies and processes. These are set out in the Group Blue Book and in supporting documents, and are applicable to all parts of the business, except where specifically noted. To contribute to the current and future success of the Group, all the employees of the companies of the Group are expected to be familiar with the Blue Book, to actively adopt and to comply.

The Board of Directors of Capgemini represents all shareholders collectively. It acts at all times in the interests of the Group, and determines overall strategies and oversees their implementation. All major strategic decisions and decisions material to the financial position or the commitments of the Group must receive prior approval from the Board of Directors.

The Board of Directors has established several specialized committees (the "Committees") which derive from it and which act under its authority. They are responsible for examining or preparing matters falling within their terms of reference, making proposals and formulating opinions to the Board of Directors concerning decisions to be made by the Board of Directors. They have a consultative role only.

The Ethics & Governance Committees' first mission is to ascertain the conformity and results of actions implemented to ensure the promotion and respect of the seven Core Values, notably the strict application of the Group's ethical principles, the practices related to the management of staff, the compliance of commercial partnerships and alliances with the values of honesty and freedom of judgment, in support of the Group's full independence, and the application of prudential rules regarding relations with shareholders and financial markets, and information supplied to them.

The Ethics & Governance Committee is also tasked more generally with overseeing the application of leading corporate governance practice within Cap Gemini S.A. and its main subsidiaries, including those in Canada.

Corporate Values

As the Group evolves, the seven values remain vital to Capgemini's development. Capgemini's decision-making and work at a company and individual level is guided by these principles. These seven values lie at the heart of everything that the Capgemini Group does. Values are important for respecting, defending and upholding the Group as an ethical and responsible business and for protecting its reputation. The values are:

- **Honesty**
  Denoting integrity, loyalty, uprightness, and a complete refusal to use any underhand method to help win business or gain any kind of advantage. Growth, profit and independence have no real worth unless won through complete honesty and probity. Everyone in the Group should know that any lack of openness and integrity in business dealings will be penalized immediately once proven.

- **Boldness**
  Implies a flair for entrepreneurship, a desire to take considered risks and to show commitment (clearly linked to a firm determination to uphold one's commitments). This is the very soul of competitiveness— making firm decisions and seeing them through to implementation, and being willing to periodically challenge one's direction and the status quo. Boldness needs to be combined with a certain level of prudence and a particular clear-sightedness, without which a bold manager can become reckless.

- **Trust**
  The willingness to empower both individuals and teams and to make decisions as close as possible to the point where they will be put into practice. Trust also means favoring open-mindedness as well as widespread idea- and information-sharing.

- **Freedom**
  Indicates independence in thought, judgment and deed, entrepreneurial spirit and creativity. It also means tolerance, respect for others and for different cultures and customs—essential qualities for an international group.

- **Team spirit / Solidarity**
  Designates friendship, loyalty, generosity, fairness in sharing the benefits of group work; accepting responsibilities; and an instinctive willingness to espouse joint efforts even when the storm is raging.

- **Modesty**
  Signifies simplicity, the very opposite of affectation, pretension, pomposity, arrogance and boastfulness. Simplicity does not imply naivety but is, rather, about being discreet, showing natural modesty and common sense, being attentive to others and taking the trouble to be understood by them. It is about being frank in work relationships, loosening up, and having a sense of humor.

- **Fun**
  Fun means feeling good about being part of the Group or of one's team, being proud of what one does, experiencing a sense of accomplishment in the search for better quality and greater efficiency, and feeling part of a challenging project.

Code of Business Ethics

Capgemini established an Ethics & Compliance Program in 2009. As a fundamental part of this program, Capgemini's values, rules and principles have been encapsulated in a formal Code of Business Ethics ("Code"). The Code aims to explain the behavior that is expected from all of Capgemini employees, while at the same time relying on the employee's wisdom, judgment, and adherence to Group principles. The Code also requires that leaders within the organization have additional responsibilities with respect to business ethics.

Ethics do not allow for compromise since ethical behavior is, by definition, non-negotiable. Every single employee in the Group, regardless of his or her position and level of seniority, should therefore be aware of and comply with the Code of Business Ethics. No matter where the company operates or whatever the economic circumstances are, the Code must be followed and it is mandatory for Group compliance. On an annual basis, employees are required to review the Code via on-line training. The goal of the online training is to help employees fully understand the Code and comply with its values and principles of action in their daily work. Completion of the training is tracked internally.

Group Anti-corruption Policy

Our Anti-Corruption Policy focuses on one of the standards set out in the Code of Business Ethics, in the "Bribery and Corruption" section. Its purpose is to help Group company employees worldwide identify and avoid situations that could violate anti-corruption laws. It is written in a simple and practical manner and it informs Group company employees of what they can and cannot do and where to find support. The Policy document explains what is considered as corrupt business practices, and also provides detailed practical guidance along with certain do's and don'ts. This Policy also extends to the Groups relationships with third parties and suppliers.

Capgemini employees at all levels and at all locations are required to comply with the requirements of the Policy. The Policy document together with guidelines, training material and frequency asked questions ("FAQs") are made available to all the employees through the Ethics and Compliance Hub on Talent.

Raising Concern Procedure

The procedure for reporting concerns is mandated by Cap Gemini S.A. and implemented in each country in which the Group and all of its subsidiaries operate and is intended to operate in conjunction with the Code of Business Ethics. This procedure applies to all employees and is designed to be a readily available means for reporting concerns through internal channels. Furthermore, this procedure is designed to provide protections to all employees who report concerns in good faith, and to promote a workplace environment in which employees can raise concerns free from fear of retaliation.

The Raising Concern Procedure is intended for the reporting of concerns with regard to possible misconduct, fraud, wrongdoings, breaches of policies (including but not limited to the Code and the Blue Book referred to above), laws or regulations (including irregularities in accounting, auditing or banking matters, bribery, unfair competition or improper financial reporting related to the business of the Group and/or Company), or where the interests of the Group and/or Company or health and safety of any employee is at risk. The procedure provides a confidential mechanism for reporting concerns to the North America Ethics & Compliance Officer or a lawyer in the North America Office of General Counsel, by submitting an email or placing a call into a "Whistleblower Hotline". The procedure is posted on the internal intranet, and an annual reminder is sent out to employees.

For reports made under the Raising Concern procedure, a preliminary assessment is conducted to determine the appropriate course of action. The regional Ethics & Compliance officer will either instruct the Internal Audit department or any other appropriate person to conduct an investigation. The company, if possible, will acknowledge receipt of the reported concern to the reporting individual. During the investigation, the company will always respect principles of fairness.

Human Resources

Human Resources maintain current policies and procedure through standard annual updates or more frequently as needed. These policies are updated and available to Inergi (i.e., full time and contract) employees via the company intranet.

The Capgemini Human Resources department has defined formal hiring policies and guidelines that assist in selecting qualified applicants for specific job responsibilities. Hiring policies require minimum education and experience based on position. Applicants must submit completed application forms, references, and a resume.

Performance reviews, in which employees are evaluated based on the responsibilities of their particular job, are conducted on an annual basis. All employees are expected to meet performance and attendance standards and to follow Inergi policies and procedures.

Code of Conduct

All employees are issued the Capgemini employee handbook upon employment, the Capgemini Code of Conduct is detailed within the handbook. The Capgemini Code of Conduct is also available for review on the intranet; thus making it readily available to all employees for review.

Upon initial employment, all employees are issued the Acceptable Use of Information Technology and Telecommunications policy. All new employees are required to read the policy upon initial employment. Third party contracting agencies are required to sign master service agreements which address confidentiality and customer information.

New hires are required to sign offer letters that include their acknowledgement and understanding of the Code of Conduct and confidentiality standards/requirements for Capgemini and customer information.

Social Responsibility and Stewardship

Capgemini's fundamental objectives are to:

- Allow its customers and partners to benefit from its expertise and know-how through an open and collaborative approach;
- Ensure sustainable and profitable long-term growth;
- Provide a return on investment to shareholders; and
- Promote employee development.

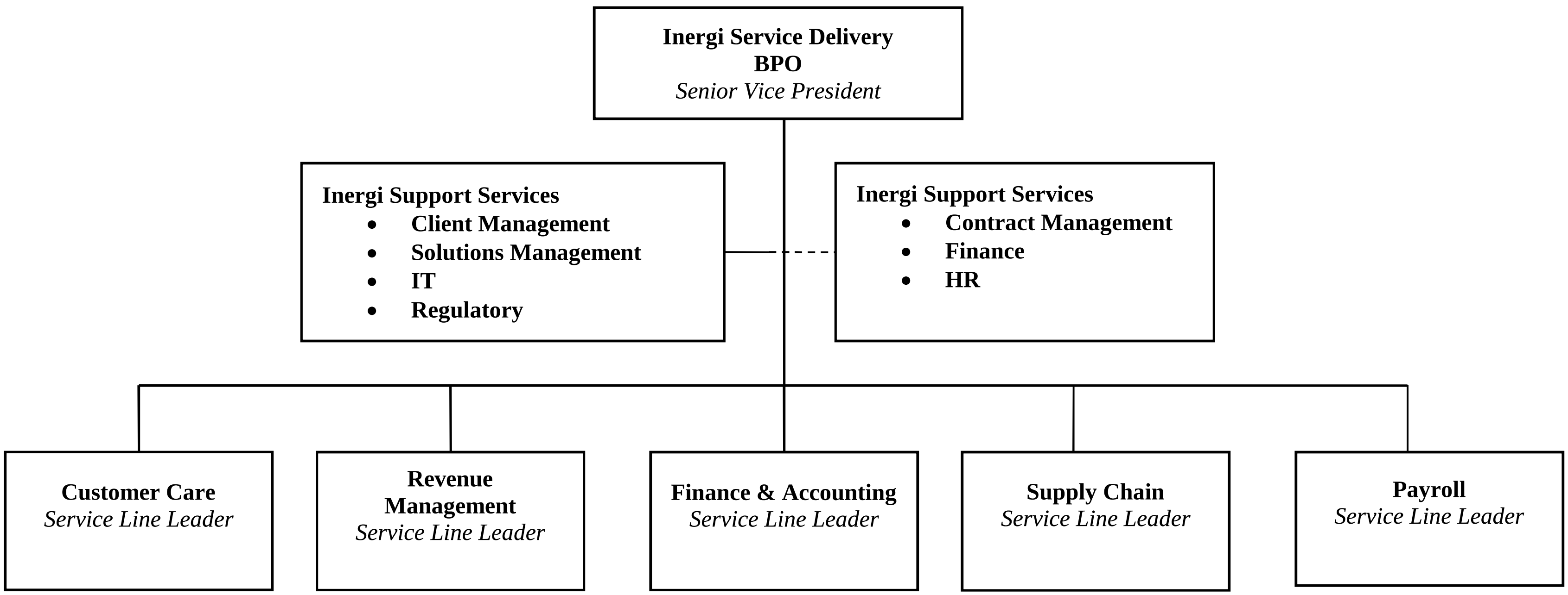
These fundamental objectives rest on key organization principles, but also on values and standards of behavior that must be complied with, upheld and made real on a daily basis.

Inergi's senior management team is comprised of the Center Delivery Chief Operating Officer and the following Service Line Leaders:

- Customer Care Service Line Leader;
- Revenue Management Service Line Leader;
- Finance and Accounting Service Line Leader;
- Supply Chain Service Line Leader; and

- Human Resources Service Line Leader.

The Senior Management Team is responsible for all aspects of delivery and works directly with Inergi's Account Management Team in exceeding client service expectations.



Enrollment to Setup
- Establish Account

Meter Read to Cash
- Calculate Consumption/ Generation
- Calculate Billing Charges
- Calculate Generation Statement
- Invoice Business Partners
- Manage AR

Record to Report
- Define Financial Structure and Plans
- Recode and Settle Transactions
- Close and Consolidate
- Report Results

Purchase to Pay
- Receive Request
- Create Contract
- Order Materials / Services
- Manage AP

Authorize to Complete
- Execute Job
- Manage Job and Complete

Hire to Pay
- Operate Compensation System

The Senior Management Team:

- Manages day-to-day tactical delivery operations / service levels;
- Provides strategic direction to the service delivery organization;
- Provides business specific guidance for key initiatives and support requirements;
- Establishes the total investment (capital and operating expenses);
- Reviews and manages performance against operating and capital budgets; and
- Reviews and sponsors performance of major projects and transitions.

During annual planning sessions, the team sets forth the mission and objectives for the year, reviews effectiveness, approves continuous improvement plans and Key Performance Indicators / targets. The output of the annual planning sessions is communicated through monthly management meetings.

The organization structure of Inergi is formally documented and updated when necessary to provide for adequate segregation of duties within Inergi and across the organization. Roles and responsibilities for personnel have been formally documented. The fundamental principles that govern the relationship which Inergi wishes to build with its employees can be summarized as follows:

- All employees will be given an annual performance review, as well as the opportunity to discuss its content in an individual interview.
- All employees are entitled to a personalized development plan indicating training options.
- All employees will have the opportunity, if they so wish, of benefiting from the help of a mentor with whom to discuss their career path.
- All employees will regularly be able to voice their opinion through a survey on overall trends concerning the company and, more specifically, on professional development.
- All employees will be regularly informed by their managers and should be able to engage in dialogue concerning their assignments and work environment.
- All employees except temporary employees and where prohibited in collective agreements, have a Performance Development Plan and an annual performance evaluation.

Training and Development

Particular attention is paid to the training of executives, account managers, and project leaders, as they play a key role in defining and implementing Capgemini's strategy. Capgemini's training policy uses a common global system called MyLearning, for which all Capgemini employees worldwide can register. This includes a catalog of courses available either in the form of e-learning or as classroom teaching. The cornerstone of Capgemini's international training activities is its University at Les Fontaines (near Paris). The curriculum is focused on the most advanced skills development programs in order to determine that the most thorough grounding in new technologies and business practices.

Capgemini requires a highly skilled and flexible workforce to help drive overall strategic directives and successful IT and BPO implementations to successfully compete in the marketplace. Investments have been made and continue to be made to ensure business driven quality training and development programs are provided to all employees through a combination of internal, external, and self-study courses. Training and Development objectives have been reflected in Management Key Performance Indicators and Balanced Scorecards, which have a direct bearing on management compensation.

The fundamental focus of competency development draws upon various approaches:

- Standard training programs,
- Mentoring systems,
- Development through e-learning,
- Training on projects, easily accessible databases for knowledge sharing, and
- Management of professional interest communities.

Regular training is provided to employees through a combination of internal, external, and self-study courses. Each manager is responsible for providing adequate practical instruction and supervision, and for the monitoring of training and educational courses. Each employee receives an annual performance evaluation that includes a review of career goals and training. During the year informal periodic performance reviews are conducted to help ensure that progress is being made against employees' goals.

Each manager is accountable for providing adequate practical instruction, supervision and for the monitoring of training and educational courses. Each employee is responsible to undertake training and development to meet skill and competency requirements as developed and approved in a Personal Development Plan. Capgemini Human Resources policies, standards, processes and tools, available on the intranet, create the necessary infrastructure to help guide the manager and the employee in training and development activities. During the year, informal periodic performance reviews are conducted to ensure progress is being made against manager and employees' goals.

Quality Assurance

As a Business Process Outsourcing organization, Inergi is well positioned to provide solutions that meet quality standards and compliance requirements. Business Processes are documented in Inergi Operating Procedures Manuals (available electronically) and updated annually, with client sign-off for acceptance. Any additions or changes to client Policies and Procedures that Inergi must comply with are solicited each month at Service Committee meetings with Inergi's client. Inergi strives to incorporate service line best practices for all policies and procedures implemented.

Evidence of Effectiveness

Inergi is diligent in maintaining quality system records to evidence its practices and facilitate effective/efficient audits. In the business process outsourcing area Inergi hosted audits focusing on: ISO 9000, the AICPA's AT Section 801 and the International Standard on Assurance Engagements 3402 (ISAE 3402). Appropriate actions are taken to address identified control improvement opportunities, with customer involvement, as required.

Security

Capgemini has formal information security policies and procedures. These documents address policies such as Acceptable System Usage, Physical Security, Logical Security and Access Creation. All personnel are made aware of these policies upon their arrival at Capgemini. Employees are held accountable for acting in accordance with defined policies and practices. The Capgemini corporate commitment to these policies ensures critical systems and information remain secure. Implementations of these security policies contribute to the realization of the following business and management objectives:

- Assure the continued availability of the Inergi and client information resources to support lawful business activities;
- Preserve the integrity of our business information to support high quality services and effective decision making;
- Preserve the confidentiality of sensitive information resources;
- Establish clear accountability for the management and use of the Inergi information resources;
- Assure the implementation of reasonable, cost-effective, and consistent information security controls and procedures throughout the Inergi and its information technology systems and networks; and
- Promote user awareness and understanding of the risks associated with the Inergi information resources.

B. Risk Assessment

Risk assessment involves a dynamic and iterative process for identifying and analyzing risks to achieving the entity's objectives and forming a basis for determining how risks should be managed. Management considers possible changes in the external environment and within its own business model that may impede its ability to achieve its objectives

Capgemini identifies the risks associated with their outsourcing services. Risks are mapped to internal controls to determine whether risks have been appropriately mitigated. Management accountability is assigned for each risk and control identified. These risks are categorized based upon potential impact to the client's financial reporting related systems. Through Capgemini's client management channel, Capgemini communicates with its key customer contacts to better understand the customer's risk and jointly plan to mitigate the risks.

C. Control Activities

Security Access Administration

TSDC-IT provides services related to user access administration at agreed upon service levels with the customer. Requests such as setup of access, disabling of accounts and password resets are managed by TSDC-IT on behalf of the client; however Inergi's client retains responsibility to ensure that client employee access requests are appropriately authorized.

Inergi Management recognizes that effective controls over logical user access are a critical component to maintaining effective security over client information. TSDC-IT manages access for Inergi employees, ensuring access privileges are aligned with job functionality and that access requests are appropriately authorized.

Inergi's Organizational Maintenance Management Procedures require that Department managers notify the Service Desk promptly regarding any staff terminations or transfers. TSDC-IT has also implemented controls at the LAN level to ensure access privileges for terminated employees are effectively removed on a timely basis.

TSDC-IT is responsible for physical security and has ensured physical and environment controls are in place at the TSDC-IT managed data centers. Environmental controls over the data center facilities ensure computer systems are protected from physical damage.

For the SAP application, Inergi's client is responsible for the design, configuration creation and maintenance of roles and profiles. Inergi's client's role strategy defines the business roles for the various business cycles, including those within the scope of Inergi's responsibilities. The roles are assigned authorities and abilities during the creation process, and are tested for appropriate access levels and segregation of duties. Once the roles are designed, tested and approved by Inergi's client, they are scheduled for transport to the live (production) environment of SAP. Inergi is responsible to execute the transport of the client approved roles from the SAP Quality Assurance (QA) environment to the SAP production (Prod) environment, on instruction from Inergi's client.

Additionally, Inergi's client defines the permitted roles per function, and advises Inergi of permitted and non-permitted roles and combinations of roles to achieve appropriate authority levels and to prevent segregation of duties conflicts.

In the event that a role is designed with authorities that will not meet the defined segregation of duties rules, Inergi's client will perform a risk assessment and advise Inergi thereof. In the event that Inergi's client assumes the business risk they are responsible for defining mitigating controls.

For the SAP application, maintaining effective security over client information is achieved through assignment of the client defined and configured roles to Inergi employees. During the provisioning of roles to Inergi users by Inergi administrators, a conflict check is carried out by Inergi's client. If a segregation of duties conflict is identified, Inergi's client will take corrective action by redesigning the role, or alternatively Inergi's client will approve the conflict. In the case of an approved conflict, Inergi client will communicate the results of their risk assessment to Inergi and will establish sufficient compensating controls to mitigate the risk arising as a result of the conflict.

On a periodic basis for SAP, Inergi conducts a review of the access levels based on organizational reporting, via the Aveksa System. The Aveksa System is designed and maintained by Inergi's client to identify authorities by user and composite role. Inergi is responsible to review and identify excessive authorities relating to Inergi users, based on the organizational roles, and take corrective action where required. Inergi Management monitors completion of these reviews and subsequent follow up actions by Inergi managers. Inergi's client is responsible to subject the Aveksa System to appropriate development, testing, change management and access controls to ensure integrity of reports generated from the system.

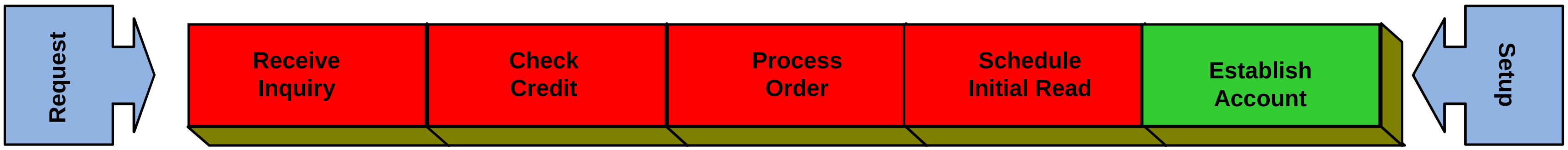
Control activities are the actions established by the policies and procedures to help ensure that management directives to mitigate risks to the achievement of objectives are carried out. Control activities are performed at all levels of the entity, at various stages within business processes, and over the technology environment. They may be preventive or detective in nature and may encompass a range of manual and automated activities such as authorizations and approvals, verifications, reconciliations, and business performance reviews.

Inergi's control objectives and related controls are included in Section IV of this report, "Information Provided by the Independent Service Auditor", to eliminate the redundancy that would result from listing them in this section and repeating them in Section IV. Although the control objectives and related controls are presented in Section IV, they are, nevertheless, an integral part of Inergi's description of controls.

Process descriptions provide an overview of the processing activities performed by Inergi in its delivery of service. Descriptions are provided for the following processes:

- Enrollment to Setup;
- Meter Read to Cash;
- Purchase to Pay;
- Authorize to Complete;
- Hire to Pay; and
- Record to Report.

Enrollment to Setup



In scope of Report

Out of scope of Report (Client Retained Procedures)

Inergi’s client owns, operates, and maintains transmission and distribution systems connecting generating facilities to deliver the electricity they produce at hydroelectric, wind and other facilities to businesses and people across Ontario. Distribution facilities operate at voltages of 50 kV or less. Transmission-connected generators connect to Inergi’s client high-voltage transmission system at more than 50 kV (50,000 volts) and are registered with the Independent Electricity System Operator (IESO).

Inergi’s client’s system is one of the largest transmission and distribution systems in North America. Inergi’s client is wholly-owned by the Province of Ontario.

Key controls related to enrollment of Business Partners are audited within the scope of this Report. The processes relating to Business Partner setup and management is conducted through the Inergi Customer Contact Centre / Business Customer Centre (CCC/BCC).

Receive Inquiry

New Business Partner / Residential

To set up new service, Inergi’s client's Business Partners or the Business Partner’s lawyer call the toll-free number or send correspondence via fax / mail or email which is routed to the CCC. Once the call is answered and/or correspondence is received, the Customer Care Agent will inquire of the Business Partner to determine the reason for the call or correspondence, and fax back a request for more information. Calls to the CCC can be for new service requests, move in / move out, changes to account information, meter-related field orders, or billing questions and power outages. If the call is for new service, the Agent inquires of the address for the service request. To determine that electric services are not already established at an address, the Agent verifies the address to determine if it exists in SAP. If the address cannot be found, the Agent will enter all pertinent information required in the mandatory fields, including adding the Business Partner and building into SAP based on the information obtained from Inergi’s client’s Business Partner. The CCC Agent, will then generate an Engineering Investigation Service Order with all required information. A field construction order is created to further proceed with the setting up of Meters

Only authorized personnel can update Business Partner information and make adjustments to Business Partner accounts in SAP.

Check Credit

If the call is for new residential service, the Inergi CCC Agent will validate whether the Business Partner has a past account with Inergi's client. Each Business Partner has only one record and is used to cross reference the account payment history. A security deposit will be assessed in accordance with Inergi's clients Security Deposit Policy. If there is a past account a security deposit will be assessed based on the Good Payment History (GPH) of the past account. GPH Criteria has been pre-defined by the Ontario Energy Board (OEB), and is outlined in the Meter Read to Cash narrative. SAP suggests a deposit amount calculated from the premise information (Residential, General Service, Remotes 3 Phase and Generator). After the deposit requirement is determined, SAP will automatically bill the security deposit on the Business Partner's initial bill. The Business Partners under the type Generators, Low Income Groups, Retailers and LDC's are exempted from security deposits being assessed. For Residential accounts where there is a past account, a security deposit will be assessed unless Good Payment History (GPH) has been maintained for 12 months.

For commercial / industrial service with no past accounts, a security deposit will be assessed. For commercial / industrial service where there is a past account, a security deposit will be assessed unless GPH has been maintained for 5 years if the service is less than 50kW or unless GPH has been maintained for 7 years if the service is greater than 50kW.

Security Deposits for Business Partners without 12 months Premise Historical Consumption Data are applied based on a pre-determined amount. For Residential Business Partners the Security Deposit Amount would be $375. For General Service Business Partners this amount would be $375 for < 50kW and $5,000 for > 50kW.

Business Partners may pay their security deposit requirement via cash, cheque and/or Deposit Alternative. Business Partners who have been assessed as requiring an initial deposit have the option to have the security deposit reduced or removed by providing a satisfactory external credit check or Canadian Utility Reference (a reference letter that confirms good payment history from another electric or natural gas utility in Canada where the Business Partner was previously a customer). Deposit amounts are reviewed on an annual basis, any changes may result in an increase to the security deposit or a partial or full refund.

Establish Account

All Business Partner information is verified by Inergi's client's Business Partner when the order is entered by the CCC Agent. When creating an order for non-interval clients, CCC Agents must complete mandatory fields which include updated mailing address and date of Move In / Move Out. For Smart Meter Business Partners, each new account has a unique Service Delivery Point ID (USDP ID) that was obtained from the Meter Data Management Repository (MDM/R). Upon completion of the account set up, which includes synchronization of the USDP ID between SAP, MDM/R and the collection computers, the SAP system assigns the Business Partner a unique account number. Further a Contract account is created for the Business Partner which is used to track usage and billing for Inergi's client's Business Partners. For every Business Partner created, based on the premise(s) provided as occupied for residential or non-residential purposes a Contract Account is created. A Business Partner Contract Account is required for billing purposes.

Errors related to synchronization of meter information between SAP and MDM/R is raised in Meter To Cash Composite Application (MTCCA) by the Meter Operations Management Systems (MOMS). Inergi's client is responsible for the completeness and accuracy of information in MTCCA, and to monitor these errors through to resolution. Service Orders are requests from CCC Agents for field work to be performed at a specific premise and include the scheduling of the initial meter read. For

Service Orders, the request comes directly from the Business Partner via phone call, correspondence (mail or fax), or Internet to the CCC and to Inergi's client through SAP. CCC issues the appropriate Service Order which is then assigned to Inergi's client's field personnel. Inergi's client's field personnel are then responsible to assign, dispatch and update the Service Order with the initial read. Once the Service Order has been completed and the initial read has been taken, the Service Order is then sent back via courier or fax for CCC to complete.

Tariff Selections / Assignment

Billing Cycle is a mandatory field that is assigned by Inergi's client's field personnel.

A CCC/BCC Agent assigns a tariff to Inergi's client's Business Partner's account at the time of set up for existing services based on meter type and/or expected consumption and predefined rules from Inergi's client. The tariff plan for conventional Non Time of Use (TOU) and TOU Business Partners remains the same. As a Business Partner is converted to a TOU Business Partner, Inergi's client is responsible for assigning the corresponding TOU tariff to the account. All new accounts are set up on Standard Supply initially. For a tariff change (i.e., Rural Rate Protection Credit) on an existing account, the Business Partner must complete, sign and return a completed form (Declaration to Apply for Year Round Status). The Declaration is not required when a new owner is moving into a premise that was previously designated seasonal. The CCC/BCC Agent verifies that all the criteria have been met before making the tariff change. An annual review of Business Partner tariff (Annual Electricity Monitoring) is performed by Inergi's clients BCC Department. The Annual Electricity Monitoring File is created and sent to the CCC/BCC to review and update where required. This is done each year in January. Reports are generated from SAP which would relate to consumption between the period January and December of previous year. In case of Annual Demand monitoring, a period of 12 months is required for evaluation. In case of Price Protection, a minimum of 6 months is required; however in cases where the available consumption data is less than 12 months, the same would be annualized. If changes are made to Inergi's client's Business Partner's account, a letter will be sent to inform them. A contact will be created in SAP if all criteria have been met. If all criteria have not been met, the account does not qualify for a tariff change and a standard letter indicating the same is sent to Inergi's client's Business Partner. A rate class verification letter is mailed out to the Business Partner if:

- Rate class does not match bill group, meter reading schedule, and route;
- A Miscellaneous Work Item –has been received from Inergi's client's field personnel indicating that the premise does not appear to be occupied on a year-round basis (e.g., currently classified as Residential and should be Seasonal);
- Business Partner has questioned their eligibility; and
- New Premise and Meter Route Assignment (Non Interval Account Types).

Connect Service Orders and the Set Meter Orders are automatically generated by SAP for new premise locations based on directions received from Inergi's client's Business Partner or the Business Partner's lawyer. New account setup is not complete until the Connect Service Order and Set Meter Order are completed by Inergi's client. Outstanding Connect Service Orders and Set Meter Orders are monitored and followed-up by Inergi's client. At the time of a Business Partner account creation, the Business Partner's name and premise information is combined in SAP, supplemented by details relating to meter route, billing cycle, initial read and device information. Inergi's client's field personnel will assign the meter route based on neighboring properties (e.g. postal codes).

The device information is used to identify the meter with the location for usage and account tracking. Commercial Business Partner's requests are directed to the BCC Department. The Agent will discuss the Business Partner requirements, pricing options and apply a security deposit where applicable.

Application Controls for Non-Interval Accounts

On a monthly basis, calls are monitored on a random basis, (minimum of three calls per CCC staff per month) by the Inergi Monitoring Agents for quality assurance. This is done through the Witness Monitoring Program.

CCC Management authorizes Agents access to change Business Partner's information within SAP based on Group Name and appropriate authorization and access that is required. Business Support reviews these changes to the CCC Agent provided by the CCC Manager and will have the TSDC-IT Department change / update the system user accounts only based on instructions from Business Support.

In SAP Roles are defined and in place to secure access to transaction processing and the ability to change data through the application is based on the individuals' demonstrated need to view, add, change or delete data, and are reviewed by management for re-accreditation. To ensure integrity of data, system access contains tiered security features which are job specific and prevent changes, and/or adjustments to transaction information by unauthorized personnel. The security profiles are updated by Inergi through the Service Desk (Help One).

New Construction Interval Accounts (New Business Partner)

Account setup for new Interval Business Partners can be received via phone call, internet or correspondence and is managed by the Business Customer Centre. Inergi Business Customer Centre (BCC) will obtain all pertinent information and issue an Engineering Investigation (EI) order on a company use account, with the exception of a Business Partner that already exists in SAP (i.e., non-interval to interval Business Partner). Inergi's client's field personnel will investigate and contact the Business Partner, arranges a site visit, and prepare a written estimate. If Business Partner agrees to be set up as an interval Business Partner, Inergi's client's field personnel will create a pending account in SAP and instruct Inergi's client's Meter Relay and Services Department of the new setup of an interval account. Inergi's client Meter Relay Services interrogates the meter through the phone lines and emails the BCC with the Business Partner and metering information (including Recorder IDs, channel configuration effective date and summary info) and will request that the Business Partner be set up in SAP.

Interval Accounts / LDC / Retail Generator

The initial set up of an Interval Metered Business Partner is done by Inergi's client. This includes creation of a Business Partner, Contract Account, and Contract as well as the Technical Master Data. Further, Inergi's Client's Transmission and Distribution Settlements receives the meter details from Meter Data Services, Inergi's client and the Business Partner set up thereon is done in IEE system (ITRON Enterprise Edition).

Application Controls

To gain access to the system, users are set up with Roles in SAP. This is administered by Service Desk based on approvals from Inergi's Client. Inergi staff access within SAP is approved by Inergi management, through the roles defined by Inergi's client. On a periodic basis Inergi staff access to Business Partner information and Classification, as provided by the roles, are reviewed for appropriateness by Inergi management, based on data provided by Inergi's client.

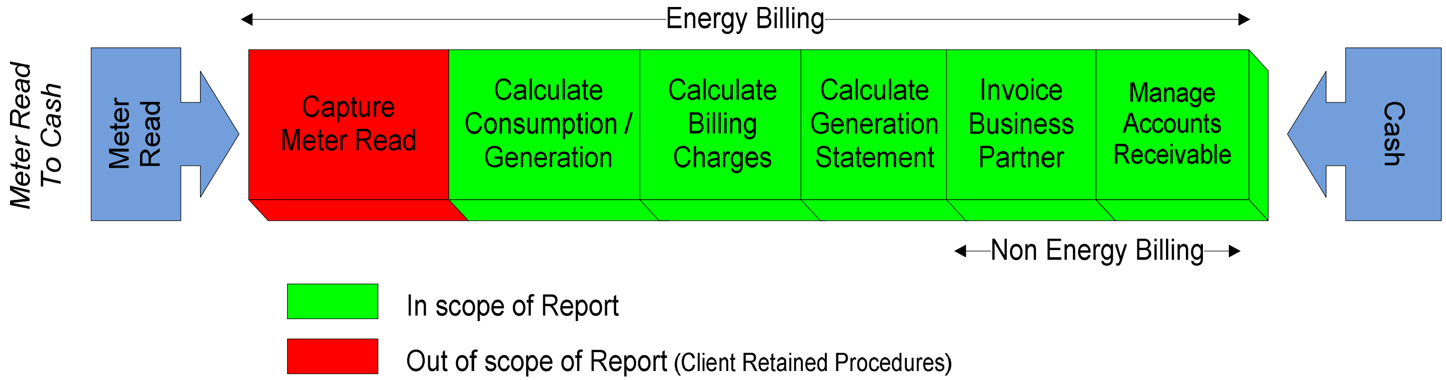
Non-Energy Account Setups

Maintaining the Customer Master File

Non-Energy Billing is maintained through contracts in SAP. Contracts for Inergi's Client's Real Estate are created or updated by Inergi AR in SAP based on approved requests received from Inergi's client. Inergi AR prepares the Customer Master setup checklist for further setup of Customer Master Data. Inergi, AR will send a notification "Record Customer Account Number" to the Inergi's client requestor to indicate completion of request.

The Customer number is assigned automatically by the system. System controls will not allow the setting up of a new Customer with an existing number, unless the existing Customer is assigned a new location (e.g., various offices of Bell Canada). Customers with multiple locations have one single Customer number with many location numbers

Meter Read to Cash



Energy Billing

Capture Meter Read

From the enrollment process, each Contract under a Contract Account is set with a mandatory meter route and bill group by Inergi's client's field personnel. There is a 4-day reading window assigned to each bill group. Actual meter reads are scheduled to be collected by Inergi's client's Business Partner on a periodic (e.g., monthly, bi-monthly, quarterly or annually) basis. Meter reads are collected by Inergi's client's field personnel manually through hand held devices, automatically downloaded through the phones for Interval Business Partners, and by Inergi's client's Business Partner supplied readings through phone, IVR (Interactive voice response) or the internet. If no actual meter reading is scheduled, SAP will produce an estimate for Inergi's client's Business Partners usage based on certain pre-defined parameters as configured in SAP. The completeness and accuracy of meter read inputs into SAP are the responsibility of Inergi's client.

Billing orders are created in SAP on a monthly basis according to the meter reading and billing schedule. This schedule defines both the meter reading date for meters and the scheduled billing dates. Billing will be processed as part of the nightly batch processes once the billing order is fulfilled. For metered services, the billing order is considered fulfilled once a valid meter reading is available. For un-metered services, the billing order is considered fulfilled on the scheduled billing date, per the meter reading and billing schedule. There will be a 4 day window from the scheduled meter read date to the end billing date before SAP will estimate. Accounts are billed in SAP based on commodity rates which are received from the Independent Electricity System Operator (IESO) or based on Regulated Price Plan (RPP) rates.

Calculate Consumption

Conventional (Non TOU) Accounts

Once an Account enters the 4 day meter reading window, the Meter Reading Order (MRO) is generated in batch the night before the first day of the meter reading window (Day 0) to obtain meter reading data. If the billing month is a 'scheduled estimate' month, the MRO will be created on Day 0 and the SAP generated estimate will post the same night. If there is no actual reading/usage received SAP will estimate the reading/usage on Day 4 of the window.

For RPP Non Retailer-Enrolled Conventional Accounts (Non TOU) once the readings/usage is received the meter reading data is sent back to SAP for validation and billing, regardless of which day the reading is posted the account will not go through billing until the Day 4 batch and the reading is Validated, Edited and Estimated by SAP. If the account does not pass validation, a MTCCA exception will be created which must be resolved before the account will bill. Accounts that pass validation will bill on the night of Day 4.

For Spot Non-Retailer-Enrolled Accounts, once the readings/usage is received the meter reading data is sent back to SAP for validation and billing. On day 11 the reading is Validated, Edited and Estimated by SAP. If the account does not pass validation, a MTCCA exception will be created and must be resolved before the account will bill. On the 11th day from the date of the reading, accounts that pass validation will bill for the commodity based on WAHSP prices received from the IESO or based on RPP rates for eligible business partners.

Time of Use (TOU) Accounts

Smart Meter Business Partners are charged on the basis of the Time of Usage (TOU). This is the consumption which is split into various time slots and they are charged accordingly. The time slots are defined as:

- Low Peak Hours: Where demand is low as compared to other hours of the day.
- Mid Peak Hours: Where demand is more than low but less than high Periods of the day.
- High Peak Hours: Where demand is highest during the date.
- Critical Peak Hours: Seasonal Demand is more than the high demand.

Usage information is collected by AMCC (Advanced Monitoring Control Computers). Smart meters communicate with AMCC and usage information is collected by AMCC. On a daily basis usage information collected by AMCC is transferred to MDM/R for centralized storage and posted in SAP for billing.

For TOU accounts, on a daily basis, a re-billing report (BR03) is generated by MDM/R and sent to SAP. The report contains revised consumption data from MDM/R which is automatically loaded into SAP.

For Retailer and Non Retailer-Enrolled Contract Accounts on receipt of revised consumption from MDM/R after day 8 of the contract's billing window/cycle, SAP updates the consumption data on contracts and generates a new bill in the next billing cycle. .

The next periodic Billing Quantity request to the MDM/R will include the current period as well as the period that was adjusted. (Further adjustment would be made to the contracts if MDM/R sends another revision to the consumption already provided).

There are various instances where a select group of BCC/CCC agents are authorized to manually enter consumption readings for TOU meters;

- After a Change Meter Order (CMO), consumption data from MDM/R does not post in SAP. When this happens, a billing exception is raised. When the agent is working the exception, the agent checks various data sources to get the correct data, which is then manually entered into SAP.
- Errors related to synchronization of meter information between SAP and MDM/R are raised in Meter To Cash Composite Application (MTCCA) by the Meter Operations Management Systems (MOMS).
- Communication errors may occur between MDM/R and SAP for specific accounts, which results in the account billing based on SAP generated estimates. A customer may provide a reading, which is treated as a billing exception. A BI 83 billing exception is raised by the agent taking the call. The BI 83 exceptions are addressed by a specific agent. The agent performs validations on the reading from the customer against history, and once validated, they are manually entered into SAP.

The manually entered consumption readings are subject to Outsort validations which interrupt the processing of a specific contract account based on pre-defined dollar threshold limits after the bill document and/or invoice/print document has been created. This validation ensures billing and invoicing outsort exceptions are captured throughout the meter reading, billing, and invoice process in MTCCA and SAP for manual review and correction by an agent before an invoice is created or is sent to the Business Partner. Inergi's client also has access and the ability to process outsorts.

Interval Metering

Interval metered billing and settlements include billing and settlements for embedded interval metered Business Partners. These Business Partners include existing end use Business Partners with a demand greater than 1000 kW, new end use Business Partners with a demand greater than 500 kW, and Business Partners that request the installation of an interval meter. It also includes LDC and DNAM Direct Business Partners embedded within the Inergi's client's distribution network.

The SAP system receives the hourly interval meter data for its interval meter Business Partners from - IEE and calculates all applicable electricity charges for these Business Partners.

Exception Handling

Within SAP, the Meter to Cash Composite Application (MTCCA) is used to prioritize business process exceptions and provide a work-list and Business Partner centric view of exceptions from different source systems (SAP and IEE). MTCCA pulls information in real-time from the SAP exception repository. Reports from MTCCA are used by BCC/CCC agents and Inergi's client for routing and working on the exceptions based on the priority, due date and exception type.

Within SAP, there are circumstances where a Business Partner's bill is not generated and an exception is not captured in SAP or MTCCA. These circumstances result in 'No Bill' accounts. Inergi's client is responsible for identifying and resolving 'No Bill' exceptions for Non-Interval Metered consumption accounts.

The Wholesale and Settlements staff uses reports from SAP to identify and resolve Implausible Read exceptions, 'No Bill' Interval Metered consumption accounts, and Billing and Invoicing Outsorts. The Retail Settlements team use reports from SAP to identify and resolve Billing and Invoicing Outsorts, including 'No Bill' Interval Metered consumption accounts and embedded retail generator accounts. For Interval Metered consumption accounts the Meter data exceptions due to meter data validation checks are flagged as billing outsorts in SAP, which are monitored and resolved on a daily basis by the Retail Settlements Team.

Once a work item is resolved, the BCC/CCC Agents or Inergi's client will document and close the exception or Business Process Exception Management (BPEM) case in SAP which will then be updated automatically to be reflected in the MTCCA tool.

The following types of Meter Reading exceptions are identified by MTCCA:

- Implausible Reads – Meter Readings that failed to meet SAP validation
- IEE Exceptions – Meter Data Acquisition Exceptions
- Service Notifications - notifications that are created (either manually or automatically) for issues such as meter trouble reports
- BPEM (Business Process Exception Management) cases – All other exceptions

Inergi is responsible for monitoring the Implausible Read errors through to resolution. Inergi's client is responsible for monitoring the IEE Exceptions, Service Notifications and BPEM errors through to resolution.

Billing and Invoicing outsorts are not created as BPEM cases, however, the resolution of the outsorts will be automatically reflected in the MTCCA tool. Inergi is responsible for monitoring the Billing and Invoicing Outsorts through to resolution.

Inergi staff access within SAP is approved by Inergi management, through the roles defined by Inergi's client. On a periodic basis Inergi staff access to Exception Handling and to Modify Meter Data, as provided by the roles, are reviewed for appropriateness by Inergi management, based on data provided by Inergi's client. Inergi's client also has access and the ability to perform Exception Handling and to Modify Meter Data within SAP.

Exception Handling – Meter Reading

Meter readings go through a validation process when data from MDM/R is posted in SAP, when it is estimated or when it is manually input. This process will record the reading to be either plausible or implausible. Plausible readings are deemed to be correct. Implausible readings require further review and will prohibit the contract from billing. The different types of implausible readings are;

- Zero Consumption – when a meter has had zero usage
- Permissible Number of Estimations Exceeded – when the permitted number of estimates has been exceeded
- Tolerance Limits –when consumption has not fallen in the forecasted limit established by Inergi's client
- Meter Overflow – when meter readings have spun around (example 99,999 to 0)
- Independent Validation Not Possible - when SAP is unable to validate the reading.
- Previous Reading Implausible – when the meter reading result from the previous meter reading is implausible, the current meter reading result is deferred
- Validation for Fixed Valued Deviation – when the meter reading from the previous removal or certification reading is exceeded when the device is installed

Once the implausible reading is released the status will change to a billable status. An implausible reason may change when working the exception. The reason for the implausible reading may change as a result of the action taken by the agent before the implausible reading is closed. Example; agent may work a Tolerance Limits implausible reading and after performing the bill correction the Tolerance Limits implausible reading could then automatically be changed to a Zero Consumption implausible reading. All implausible reading exceptions must be cleared before a contract will bill.

When an Inergi agent is working an implausible exception, a warning will be displayed if implausible meter data is entered. The agent will review the entry, and take the necessary steps to correct it. There is an option to "Release without correction", if this is the appropriate action. An example of when this would be the appropriate action is when the energy usage has changed, or when they are correcting an account that has been estimating for an extended period of time.

Through MTCCA, SAP can provide a view at the business partner level, of exceptions from different source systems or applications. The report from the MTCCA is used by BCC/CCC agents, and Inergi's client for routing and working on the Implausible Reads exceptions based on the priority, due date and exception type.

By selecting a particular implausible meter read, the detailed description of exception would be available. Based on the investigation, the possible resolution actions by the agent could include Release the bill, Estimate the reading, Reset - locking the meter in SAP for further follow up, Control reading order (for checking of the reading done), and Service Order (which requires a field visit to check the meter reading).

Inergi staff access within SAP is approved by Inergi management, through the roles defined by Inergi's client. On a periodic basis Inergi staff access to Exception Handling and to Modify Meter Data, as provided by the roles, are reviewed for appropriateness by Inergi management, based on data provided by Inergi's client. Inergi's client also has access and the ability to perform Exception Handling and to Modify Meter Data within SAP.

Application Controls

The IEE application is used to retrieve and store consumption data for interval metered Business Partners. This application is operated by Inergi's client.

Calculate Billing Charges / Invoice Business Partner

Commodity Charges – Non-Interval Metered Accounts

For non-interval accounts (Mass Market), SAP automatically bills Inergi's client's Business Partner as per the billing cycle noted in the enrollment process. The commodity charges including, Retailer Charges for DCB (Distribution Consolidated Billing) are calculated based on consumption and the tariff and other rates as associated with the Business Partner account in the rate table. If a meter read is not available for a particular account that should be billed on that day, then SAP will generate an estimated usage based on historical consumption at the premise for the same time last year and consumption at the premise for the last actual period or based on pre-defined criteria within SAP. Only TSDC-IT personnel can make changes to the estimation logic, based on requests from Inergi Business Improvement Analyst, Business Support Department.

The estimate is calculated from previous billing data in a descending order of priority:

- Automatic Meter Read Index (AMI) Indexes;
- Established Average Daily Consumption (ADC); and
- Average Monthly KWH Defaults from Inergi's client

For non-interval metered accounts, SAP calculates commodity charges at spot price using the Net System Load Shape Weighted Average Hourly Spot Price (WAHSP) calculated in SAP.

Commodity Charges – Interval Metered Accounts

Commodity charges for Interval Metered Business Partners are calculated in SAP, and Billing Documents are generated according to the Meter Reading Unit (MRU) schedule stored in SAP. The commodity charges, including Retailer Charges for DCB (Distribution Consolidated Billing), are calculated based on meter read data obtained from the contract profile and rates in the rate tables associated with the Rate Category.

For interval metered accounts, SAP calculates commodity charges at spot price using the Hourly Ontario Energy Price (HOEP).

Miscellaneous Charges

SAP automatically checks Business Partner records to determine and apply any application outstanding balance, late charges and/or NSF fees to contract accounts with NSF cheques.

Interval Billing Adjustments

SAP is the system used to calculate charges for interval metered accounts based on rates approved by the Ontario Energy Board and the Hourly Ontario Energy Price for commodity charges.

Interval Meter accounts are billed using hourly consumption data and the Hourly Ontario Energy Price (HOEP). All hourly consumption data and price (HOEP) is stored in SAP and is provided by Inergi's client's IEE system that is retrieved from the IESO.

Sometimes manual adjustments are made to the IM Business Partners usage based on IM Business Partner complaints or requests from Inergi's client. These manual billing adjustments are calculated by RS staff, and the calculation is approved by the Settlements Agent Team Lead. They are subsequently submitted to the Inergi's client's Manager T&D Settlements for approval. These requests are tracked in the manual adjustments log, or an equivalent. Once they have entered into SAP, they are subsequently reviewed in the Manual Adjustments Reports.
Manual adjustments are also made to the IM Business Partners usage based on a monthly Set Off Sheet that the Wholesale Settlements team provides to the Retail Settlements team. This monthly Set Off Sheet is a report detailing the Bill 100 / RESOP adjustments to be applied for that month. The RS team enters this information into an SAP document using the FICA template.

There are two Manual Adjustments reports that are reviewed and by the Settlements Agent Team Lead on a monthly basis.

1. The Manual Adjustments by Complex Contracts report which includes Bill 100/RESOP Adjustments and other the manual adjustments that were entered into SAP against the Complex Billing Accounts which are defined based on the bill groups. The Settlements Agent Team Lead reviews these reports on a monthly basis, to verify that the adjustments in the reports match the Manual Adjustment Log. If there are adjustments to Complex Billing Accounts that were not entered by the RS team, the Settlements Agent Team Lead follows up to determine why these adjustments were entered. If they are not applied to Complex Accounts, they are noted, but not verified.

2. The Manual Adjustments report based on Employee ID includes the manual adjustments that were entered into SAP by the RS team, regardless of the contracts that they were entered against. If there are adjustments entered by the RS team to accounts that are not applied to Complex Billing Accounts, the Settlements Agent Team Lead follows up to determine why these adjustments were entered.

Inergi staff access within SAP is approved by Inergi management, through the roles defined by Inergi's client. On a periodic basis Inergi staff access to enter Billing Adjustments related to energy accounts in SAP, as provided by the roles, are reviewed for appropriateness by Inergi management, based on data provided by Inergi's client.

Inergi's client supplies Inergi with Rate Templates for any rate changes that need to be performed. Any rate changes in the production environment follow the Change Management procedure that is part of the TSDC-IT report scope.

SAP Billing Adjustments (Common to Non-Interval and Interval)

Billing adjustments are entered into SAP by authorized Inergi BCC/CCC Agents. Every time an adjustment is made on an account, there must be a detailed contact created which indicates what action was performed and the reasoning around it. Reversing bill or invoice documents will allow users to make necessary changes. If rebilling is not performed the same day a user may need to add a billing block on the contract to ensure it does not bill before all adjustments have been completed. If a reversal has been completed and the contract is rebilling, the rebill will follow the normal validation process. Performing a rebill will update the due date of the invoice to match the due date of the invoices that are invoiced that night. Inergi's client has provided Decision and Limits for Supplier – CSO by which Inergi can authorize adjustments up to a maximum of $10,000 depending on the adjustment required. Inergi's client will be responsible to approve all adjustments over Inergi signing authority.

Retailer Charges for DCB-RLI (Retailer Line Items) Business Partners (Common to Non-Interval and Interval)

Inergi's client's Business Partner who is enrolled with a Retailer and the Retailer has chosen the billing option of DCB-RLI will have their bill generated through SAP. The Retailer must submit to Inergi's client the line item charge(s) to be incorporated on the Business Partners' bill. All Invoice Bill Ready (IBR) line items received by the billing cut-off date are validated and billed. A Retailer confirmation 'Application Advice Accept' is sent for all acceptable IBRs. If the IBR transaction from the Retailer is received after the cut-off date, the transaction is rejected by the Workflow System.

Theft of Power

Although actual meter reads are scheduled to be collected by Inergi's client's Business Partner on a periodic (e.g., monthly, bi-monthly, quarterly or annually) basis, there may be situations where Inergi's client's Business Partners have by-passed the meter and the true consumption used at the property is not registered to the meter. These situations can be identified by Inergi's client's field personnel, the police or another Business Partner. When this issue is discovered, a Revenue Protection Service Order is issued by an Inergi BCC/CCC Agent to request Inergi's client's field personnel to investigate the possible theft of power issue. The results of this Service Order, which include reading taken while at the property, pictures of the theft, if possible, and any other information that may help with the investigation, are sent back to Inergi BCC via fax or courier. Inergi's client's field personnel are responsible to determine that the information provided to the BCC is accurate and complete. If it is determined that there is a theft of power issue, the BCC Agent will calculate the unregistered usage based on pre-defined criteria provided by Inergi's client. Although Decision and Limits for Supplier – CSO exists for Inergi, most of the charges applied are sent for approval, even if the charge is within the Agents authority. All charges that are outside of Inergi signing authority are forwarded to Inergi's client.

Late Payment Charges

All bills generated from SAP are due 20 calendar days after the bill is generated. If full payment has not been received by Day 20, SAP will automatically apply Late Payment Charges (LPC), through a batch process, on the outstanding balance of the account for active accounts. LPCs are applied to all businesses except tax and security deposits. The LPC rate is 1.5% compounded monthly (19.56% per annum) and the rate is reviewed by Inergi's client annually.

Billing analysts run a report on any outstanding Accounts Receivable (AR) during the last week of the month. The AR Clerk reviews the report and looks at each individual account to determine that debits and credits are offset.

In the beginning of each month, the AR Clerk runs a job to initiate automatic calculations of late payment charges via batch process on accounts with outstanding balances.

Outsorting

Outsorting is a SAP protective validation measure, which interrupts the processing of a specific contract account based on pre-defined dollar threshold limits after the bill document and/or invoice/print document has been created. This validation ensures billing and invoicing outsort exceptions are captured throughout the meter reading, billing, and invoice process in MTCCA and SAP for manual review and correction by an agent before an invoice is created or is sent to the Business Partner. The pre-defined dollar threshold limits have been established by Inergi's client.

Outsorts are classified as Billing or Invoicing.

Billing Outsort Validations

Billing Outsorts is based on a comparison of the calculated dollar amount during billing against a range of expected debit and credit dollar amounts. This outsorting check is defined at the Rate Category level.

The check performed at the contract level is carried out when a billing document is calculated, comparing the total current charges for that service to the billing document. If the current amount of the bill falls outside the defined range of debit and credit threshold amounts, the billing document appears on the List of Outsorting Billing and Invoicing Documents. The contract account will not invoice a bill that is in an outsorted status. Billing documents that are outsorted will not be invoiced until the bill document is manually released from the List of Outsorting Billing and Invoicing Documents.

Outsorting check groups at the Rate Category level will have multiple checks. Each outsorting check group will have a validation range defined in SAP for periodic bills as well as for final bills.

Invoicing Outsort Validations

Invoicing Outsorts is based on a comparison of the calculated dollar amount during SAP invoicing against a range of expected debit and credit amounts. This outsorting check group is defined at the contract account level. This validation check applies to all contracts that fall under this specific contract account. This check is against the total current charges and/or the total current charges and any miscellaneous FICA charges, taxes, retailer charges (IBRs), any balance forwards/past due amounts, as well as any 3rd party charges.

The invoice outsorting check validates the total current charges against the limits set for the outsorting check groups for both active and final bills. Limits are determined and configured for each class of Business Partner based on an analysis of the historical invoice amounts.

An invoice outsort group is set up for a Contract Account at the time a new contract account set up. Default Invoice Outsorting groups are set by Business Partner class. Defining outsort check groups for invoicing outsorts is the same as defining outsort check groups for billing outsorts.

A manual outsort option is also available, known as Pull Bills, to be used if correspondence needs to be attached to the bill. It can also be used to verify the bill print quality before it is sent to the customer. Manual outsorts are not based on a comparison of the calculated dollar amount against a range of expected debits and credit amounts. Examples of when a manual outsort may be applied are:

- Account was not billing and a manual outsort (pulled billed) was placed on so that when it did start billing again we could review the bill and attach the applicable letter with it to the customer.
- Escalated account that had previous errors and therefore we want to perform a manual review of the bill line by line to make sure it looks accurate (format).
- Collection based- theft of power and bankruptcies require a specific letter to go along with the bill

An account may have both a manual outsort and an outsort due to bills or invoices generated outside the parameters at the same time.

Billing and Invoicing Outsorts Resolution

When a billing or invoice document is outsorted, an agent manually validates the document using reports generated from MTCCA or SAP. If the analysis of the document is deemed correct, the agent will release the billing or invoice document for processing. The billing document will be invoiced in the scheduled batch billing jobs, and the invoice document will post to the general ledger and then it will be picked up for bill print via scheduled batch processing. If the analysis of the billing or invoice document is deemed incorrect, the agent will reverse the billing or invoice document and make any corrections necessary. Inergi's client also has access and the ability to process outsorts.

Application Controls

Inergi staff access within SAP is approved by Inergi management, through the roles defined by Inergi's client. On a periodic basis Inergi staff access to SAP Account Billings, as provided by the roles, are reviewed for appropriateness by Inergi management, based on data provided by Inergi's client.

TSDC-IT maintains the rate tables in SAP based on a spreadsheet provided by Inergi's client. In the event of a rate change, the rate changes are first loaded into the test environment and tested by performing a bill run prior to migrating the rate change to the SAP production environment. Any change to the production environment follows the Change Management procedure that is part of the TSDC-IT report scope.

SAP has a programmed randomizer that will select a number of bills for manual review by IT and Business Support personnel. The batch job that is run produces a file of accounts containing every different tariff that billed last batch, but no more than 20 of each tariff will be there. It also uses a predefined set of criteria to pull out different types of accounts, for example, Budget Billing, Electronic Funds Transfer, finalled accounts, cancel rebilled accounts, language, enrolled, so that a large variety of accounts are available to review. A System Technician from the Business Support Desk then selects, at random, a variety of accounts, which are reviewed for accuracy, using the "Bill Check Tool" provided by Inergi's client.

Calculate Generation/ Calculate Generation Statements

Wholesale Settlements

The Inergi Wholesale Settlements organization is responsible for performing two major tasks for Inergi's client: Settling Power purchases and reconciling Transmission Revenue.

Power Purchases

Inergi's client purchases power from three different sources: IESO (Independent Electricity System Operator), Local Distribution Companies (LDCs) and Embedded Retail Generators (ERGs). The power purchased from LDCs is settled under three different arrangements: Host LDC, Long Term Load Transfers (LTLT) and Short Term Load Transfers (STLT). The power purchased from ERGs is settled under two broad classifications: microFIT[1], and non-microFIT[2].

The power purchased from IESO and Embedded Retail Generators account for over 95% of the power purchases.

Power Purchase from IESO

Data Download and Validation

The IESO power purchases process starts with the receipt of the daily IESO statements. These Settlement Statements are transferred to SAP every day and validated by Wholesale Settlements, via the Daily Settlement of Preliminary Statement report to confirm that the power purchases charges are appropriate and accurate. The meter data is grouped and totalized by Energy Delivery Points. There are 211 Energy Delivery Points for Inergi's client, and validation includes verification of energy volumes and spot prices. The meter data files are downloaded by Inergi's client IEE Operator daily and this information is made available in Inergi's client systems (IEE and SAP). The meter data files and hourly prices are loaded in SAP to create proxy statements.

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[1] microFIT generators are established based on an agreement between the owner of the generator, Inergi's client, and OPA. If the generators nameplate capacity rating is 10kW or less, it is classified as microFIT.
[2] Non-microFIT generators include Legacy Generators, Renewable Energy Standard Offer Program (RESOP) generators, Hydroelectric Contract Initiative (HCI) generators, and Feed In Tariff (FIT) generators with a nameplate capacity rating greater than 10kW.

Reconciliation

Wholesale Settlements reviews the SAP Charge Code Summary report showing Daily Settlement of Preliminary Statement that provides a comparison of the Preliminary Settlement Statement from the IESO and a proxy statement based on the totalized meter data and the hourly prices downloaded from the IESO that was calculated in IEE and all discrepancies exceeding the $42 threshold (for any hour for any Delivery Point) are investigated. The Settlements Analyst prepares and files a Notice of Disagreement (NOD) with the IESO, if required. All valid adjustments appear on the Final IESO Settlement Statements.

When the IESO Monthly Invoice is received, it is matched to the total of the daily IESO statements, which were validated previously.

Payment

Once the power charges are validated, Wholesale Settlements forwards the IESO invoice to Inergi Accounts Payable Group to process the Cheque Requisition and enter journal entries in SAP. Information entered in SAP is verified by Wholesale Settlements Staff and sent to Manager of Transmission and Distribution (T&D) Settlements or delegate at Inergi's client for payment approval in SAP. Once approved, payment is made to the IESO through the Treasury process.

The power charges are recorded in the SAP GL.

Power Purchase from Local Distribution Companies (LDC)

Inergi's client also purchases power from LDCs under the following arrangements: Long Term Load Transfer, Short Term Load Transfers and Host LDC.

A Long Term Load Transfers is an arrangement whereby a Business Partner belonging to one Distributor is supplied by another Distributor. With respect to Load Transfer, the Physical Distributor is the Distributor that provides physical delivery of electricity to a load transfer Business Partner, but is not responsible for connecting and billing the load transfer Business Partner directly. The Geographic Distributor is the entity that is licensed to service a load transfer Business Partner and is responsible for connecting and billing the load transfer Business Partner. Inergi's client's Business Partners being supplied power from a neighboring Distributor are billed out of SAP and Inergi's client has to settle the power purchase with that Distributor. The settlement is typically done annually.

Short Term Load Transfer typically occurs when one Distributor (Host Distributor) provides an emergency supply of electrical energy to a requesting Distributor (Embedded Distributor). The Host Distributor measures the quantity and duration of the load transfer and invoices the Embedded Distributor. Wholesale Settlements confirms the Load Transfer event and verifies the charges on the inbound or outbound invoices and obtains Inergi's client approval (Transmission & Distribution Settlements Group) and settles these transactions.

In the Host LDC setup, Inergi's client is embedded in another LDC. That LDC reads the meters and bills Inergi's client for commodity and other applicable charges.

Data Download and Validation

Wholesale Settlements collects and packages the consumption data for Long Term Load Transfer Business Partners supplied from specific Distributors. The usage data is extracted from SAP. The usages are compiled and sent to the Physical Distributors for review and billing.

Short Term Load Transfers are verified by Wholesale Settlements Staff. These events are usually reported by Inergi's client; either through the official load transfer reports prepared by the Ontario Grid Control Centre or by Account Executives. Some Load Transfers are reported by LDC. For billable events, data is collected by temporary metering (i.e., ERA - Electronic Recording Ammeters), or in the absence of metering, the data is estimated by Inergi's client's Meter Data Services Group. Information is exchanged via emails and ERA data is sent to Inergi's client's Meter Data Services for processing. The processed data is then used by Wholesale Settlements to calculate the charges and these charges are reviewed with the LDC and Inergi's client.

In the Host LDC arrangement, Inergi's client is embedded in another LDC. The LDC reads the meters and bill Inergi's client for commodity and other applicable charges. These invoices are verified by Wholesale Settlements and the payment is made through the Cheque Requisition process.

Reconciliation

The payment is not issued until the usage data is reconciled with the LDC. In some cases, the reconciliation requires several iterations and it requires sign-off by both Inergi's client and LDC.

Payment

The inbound Load Transfer invoices are validated, approved by Inergi's client T&DS (Transmission & Distribution Settlements) and paid through the Cheque Requisition process. A similar process is employed for the outbound invoices. In these cases, Inergi Settlements prepares a blocked sales order for release in SAP based on the approved sales order detail provided by the Manager of T&D Settlements at Inergi's client. A Wholesale Settlements staff independent of the preparer verifies the blocked sales order detail for accuracy of input, prior to releasing the sales order to automatically populate the invoice. The invoice is routed in SAP to the Manager of T&D Settlements at Inergi's client for approval to release the invoice to the LDC. For the Host LDC invoices, Wholesale Settlements Staff check for reasonableness and initiate the payment.

Transmission Settlements

IESO Market Rules require that a Business Partner connected to the Transmission network must have: 1) a connection agreement in place with the transmitter; and 2) an approved process for recording meter data. As per these Market Rules, IESO will not energize a new physical connection unless Inergi's client provides a connection agreement and certain other processes are completed. Inergi's client's Manager of Customer Business Relations authorizes connection agreements prior to any new connection or any revised connection. If changes have to be made to any existing physical connection, they are made by the Meter Service Provider (MSP). These changes are also updated by IESO in its MV-STAR system.

Inergi's client must determine that the IESO has the accurate and complete Totalization Tables to receive credit for power transmitted by Inergi's client. Inergi's client determines this through authorization of Site Registration Record (SRR) by Manager, T&DS. When IESO makes changes to its MV-STAR, the SRRs are generated and are sent to Manager, T&DS in Inergi's client for authorization. Changes become effective only when IESO receives this authorization from Inergi's client which makes similar changes, as reflected in approved SRR, to its MV-STAR system.

Inergi's client's Transmission revenue is included in the monthly IESO invoice, which also records the Cost of Power (COP) purchased from IESO. The Transmission revenue and COP is off-set and the net amount is settled with IESO.

Data Download and Validation

IESO reads the meter, bills and collects from all Transmission Business Partners and makes payments to Transmitters. Inergi's client's IEE system interacts with IESO's MV-STAR system to obtain the energy consumption data. The meter data files are downloaded daily by Inergi's client and loaded into IEE and then pulled into SAP along with the month-end TRDF (Transmission Data Reconciliation File).

Reconciliation

When the month-end IESO Statement (Transmission Data Reconciliation File) is received, the Wholesale Settlements staff validates the Transmission Charge & Revenue. Validation is done using independent meter aggregation data from Inergi's client's SAP system to confirm the usage. This validation determines that Inergi's client receives Transmission Charges & Revenue for all meter points that are included in the Totalization Tables. Tariffs charged for power transmitted are validated in SAP with OEB approved TRANSMISSION tables that are issued under the Transmission Rate order by OEB. The Wholesale Settlement Analyst reviews the Monthly Settlement of Preliminary TRDF (Transmission Reconciliation Data File), Generic and Inergi's Client's, to compare the IESO Monthly Preliminary Settlement Statements with the proxy statements based on the totalized meter data and the hourly prices downloaded from the IESO. Any discrepancies exceeding $1000 for any Delivery Point shall be investigated. The Settlements Analyst prepares and files a Notice of Disagreement (NOD) with the IESO, if required.

Wholesale Settlement Analyst downloads the Summary service report showing the electricity revenue for the Bruce to Milton (B2M) Transmission Line from SAP and compares it with IESO TDRF File to see whether there are any discrepancies. In addition, the expected B2M invoice is matched with the invoice received from IESO. Discrepancies exceeding $1000 for any Delivery Point are investigated. The Settlements Analyst prepares and files a Notice of Disagreement (NOD) with the IESO, if required.

Payment

When the IESO month-end invoice is received, Wholesale Settlements confirms that the Transmission revenue is valid and prepares the Cheque Requisition Form (CRF). The CRF contains the GL entry to post Transmission revenue and COP to the GL. It is sent to the Inergi Accounts Payable for processing of the payment and recording to the SAP. When the data is input into SAP, it is sent back to the Wholesale Settlements Group for approval.

During month-end, Inergi's client's Financial Advisor reviews the Transmission Revenue amount recorded in the SAP and reconciles it with the actual amount as invoiced by the IESO.

Power Purchase from Embedded Retail Generators

Inergi's client purchases power from a number of Embedded Retail Generators. Inergi Settlements uses SAP to calculate the amounts due for all Generators on a calendar month basis. Process details are described below in 'Embedded Retail Generator Settlements'.

Inergi's client purchases power from a number of Embedded Retail Generators. Two sets of information are required to settle these generators: hourly meter data and hourly spot prices.

The Embedded Retail Generators (ERGs) can be broadly classified under two categories based on their billing schedules, namely MicroFIT and Non MicroFIT generators. The settlement process is homogenous across all of the Embedded Retail Generators.

Within the Non MicroFit category, Inergi's client has a number of Embedded Retail Generators through its Distributed Generation Program which are further classified as below:

- Legacy Generators: those who supply power and are connected directly to Inergi's Client's distribution system and are not market participants. There are currently around 40 Embedded Retail Generators from whom Inergi's Client purchases power and are connected to its distribution system.
- Renewable Energy Standard Offer Program (RESOP): program under which generators with smaller distribution focusing on renewable energy projects up to 10MW. This program was introduced to encourage and promote greater use of renewable energy sources such as Wind, Water, Solar PV, Biomass, bio-gas, bio-fuel etc.
- Hydroelectric Contract Initiative (HCI): program initiated by IESO in accordance with the direction from the Minister of Energy and Infrastructure, dated May 7, 2009. The IESO will enter into new contracts for hydroelectric facilities which are directly or indirectly connected to the IESO-Controlled Grid but not currently owned by Ontario Power Generation. The hydroelectric facility must not have been previously eligible for consideration under any renewables request for proposals issued by the Government of Ontario or the IESO, and may have either no contract, or a current contract with a provincial government body or agency, for any part of the generation output. Facilities under this program are connected to Inergi's clients Distribution and Transmissions systems and are classified as 'Large" facilities and 'Small' facilities based on their capacity to generate power more than 10 MW and less than 10 MW respectively.
- Feed In Tariff Program (FIT) and microFIT: FIT and microFIT generators are established based on an agreement between the owner of the generator, Inergi's client and IESO. If the generators nameplate capacity rating is 10kW or less, it is classified as microFIT. If the generators nameplate capacity rating is greater than 10kW, it will be classified as FIT. FIT generator settlements are processed on a monthly basis. If the generators nameplate capacity rating is less than 10kW, it will be classified as microFIT. MicroFIT generator settlements are processed on a daily basis, based on the Bill Group schedule which is established annually.

Account Setup - Setup of Account in SAP

The Generator Account setup in SAP follows the same process as defined in earlier sections for Business Partner account setup for new Business Partners. The Generator account is setup as a separate contract. The Generator Account setup in SAP is performed by the Wholesale Settlements (WS) team, based on information provided by

Inergi's Client. The WS staff validates the data provided by Inergi's client and sets up the account in SAP and initials the generator setup sheet. The account is active and ready for billing after another member of the WS team verifies the account details in SAP against the generator setup sheet and initials the same as an evidence of review.

Account Updates- Updates to Account information in SAP

Generation credit payments for microFIT accounts are paid to customers through Electronic Funds Transfer (EFT). Retail generator customers may submit a request through the BCC team to have their banking information updated. The BCC team ensures that the retail generator customer mails in a signed copy of the Electronic Funds Transfer Form (EFT), along with a Void Cheque, a Bank Confirmation Letter or Bank Direct Deposit Form. A Redirect Form is also required if:

- IESO applicant is in a single name and the banking information is in multiple names.
- IESO applicant is in multiple names, and the banking information is in a single name.
- there is a mismatch between the IESO applicant and the banking information

When documentation is received, the BCC will verify that all of the required information has been received, including original signatures. If the documentation is not complete the BCC will follow up with the customer to advise them of what is required.

The original paper copies of the forms received will be filed in the BCC, and scanned electronic copies will be retained in Numero.

The scanned copies will be sent via email to Wholesale Settlements (WS) with the microFIT number in the subject line of the email, to have the information updated in SAP.

Retail generator customers may submit a request through the BCC team to have their HST information updated. The BCC team validates that the HST number and Business Name registered on the CRA website matches the name used for the generation service in CIS and CRM. If the documentation does not agree, the BCC will follow up with the customer to advise them of what is required.

Once the documentation matches, the BCC will send an email request to the WS team to update the HST information in SAP.

WS staff enters changes to HST and banking information on microFIT accounts based on requests received from Inergi's client or the BCC and puts a hold on the account in SAP. An independent settlements staff reviews the change and removes the hold on the account.

WS staff enters banking or rate changes to non-microFIT retail generator meter data in SAP based on requests from Inergi's client. An independent WS staff reviews the changes made.

Data Download and Validation

For non-microFIT generators, the hourly meter data is provided by the Meter Data Services Group of Inergi's client. The meter data is Validated, Edited and Estimated (VEE) before it is loaded into Inergi's IEE application which is then transferred into SAP. The Hourly spot prices are delivered to Inergi's clients IEE through the Wholesale Cost Summary produced by SAP. These hourly prices are based on the Hourly Ontario Energy Price (HOEP) from the IESO preliminary Settlement Statements.

For microFIT generators, generation meter reading information is collected by Inergi's client, and submitted to Inergi's Wholesale Settlements (WS) team via an application called CMIG (Customer Migration Tool) which is owned and managed by Inergi's client. Meter Data is transferred automatically from CMIG to SAP. For those generators where the meter read is not available in SAP, the meter data is manually entered into SAP by the Wholesale Settlements personnel based on the fax or e-mail received from Inergi's client field personnel or Inergi's client Business Partner.

Settlements staff enters changes to the retail generator meter data in SAP based on the requests from Inergi's client. An independent Settlements staff reviews the changes made to the business partner account if the change is related to banking information for payments or rate changes. The difference in generator meter data is adjusted (added or subtracted) in the following period statement in SAP.

Inergi staff access within SAP is approved by Inergi management, through the roles defined by Inergi's client. On a periodic basis Inergi staff access to maintain generator data within SAP, as provided by the roles, are reviewed for appropriateness by Inergi management, based on data provided by Inergi's client.

Reconciliation

SAP calculates the amounts due for all ERGs on a calendar month basis. The data is checked and payment amounts verified by SAP based on pre-defined criterion configured in SAP. Discrepancies found by SAP are automatically flagged in both SAP and MTCCA. These exceptions are monitored and resolved daily by the wholesale settlements team based on the reports provided from MTCCA by Inergi's Client.

Payment

Once validated meter data is available in SAP, payments are generated for all generator contract accounts based on the Bill Group schedule.

SAP uses the meter readings and Net System Load Shape Weighted Average Hourly Spot Price (NSLS-WAHSP) to determine payments for non-interval metered generators that are contracted with Inergi's Client.

SAP uses the hourly meter readings and Hourly Ontario Energy Price (HOEP) to determine payments for interval metered generators that are contracted with Inergi's Client.

SAP uses the fixed rates, where the rate is specified in the contracts/connection agreements to determine payments for interval and non-interval metered generators that are contracted with either Inergi's Client or the IESO.

Non- interval generators include both microFit and non-microFit whereas interval generators are non-microfit only.

For those Contract accounts where an invoice is generated, SAP queues the invoices for Inergi's Client's Transmission and Distribution Settlements Manager. On a daily basis, a batch process is generated to pick up all invoices in approved status for EFT payments to be processed by SAP.

Exception Handling

Outsorting is a SAP protective validation measure, which interrupts the processing of a specific contract account based on pre-defined dollar threshold limits after the bill document and/or invoice/print document has been created. This validation ensures billing and invoicing outsort exceptions are captured throughout the meter reading, billing, and invoice process in MTCCA and SAP for manual review and correction by Wholesale Settlements agents (WS agents) before an invoice is created or is sent to the Business Partner. The pre-defined dollar threshold limits have been established by Inergi's client.

Within SAP, there are circumstances where an invoice or payee statement is not automatically generated and an exception is not captured in SAP or MTCCA. These circumstances result in a 'No Bill' account. WS Agents and Inergi's client use reports from SAP to identify and resolve the exceptions and Billing and Invoicing Outsorts, including 'No Bill' embedded retail generator accounts, on a daily basis.

Wholesale Settlements agents manually analyze the identified exceptions and outsorted documents. If the analysis of the document is deemed correct, the WS agent will release the billing or invoice document for processing. The billing document will be invoiced in the scheduled batch billing jobs, and the invoice document will post to the general ledger and then it will be picked up for bill print via scheduled batch processing. If the analysis of the billing or invoice document is deemed incorrect, the WS agent will reverse the billing or invoice document and make any corrections necessary. Inergi's client also has access and the ability to process outsorts.

Application Controls

Inergi staff access within SAP is approved by Inergi management, through the roles defined by Inergi's client.

On a periodic basis Inergi staff access to maintain generator data within SAP, as provided by the roles, are reviewed for appropriateness by Inergi management, based on data provided by Inergi's client.

RPP Settlements

Regulated Price Plan (RPP)

The Inergi Wholesale Settlements Unit is responsible for submitting a declaration to the Independent Electricity System Operator (IESO) in accordance with requirements of Bill 100 (formerly Bill 210 and Bill 4) applicable to Inergi's client. The purpose of this declaration is to settle the difference between what Inergi's client paid for power purchased from the IESO (which includes cost of power at HOEP plus Global Adjustment) and what Inergi's client charged to RPP Business Partners at the regulated price.

Calculate and Approve Z-File

Z-files became a requirement as a result of the Ontario Energy Board's decision to cap the commodity rates as originally stated in Bill 210 in November 2002, and hence a large segment of Business Partners were deemed to be billable at the Regulated Pricing Plan (RPP).

In order to implement the commodity rate cap, the OEB introduced eight new charge categories which are required to track line items billable to the IESO. These charge categories are also referred to by Inergi's client's Revenue Management Unit for audit purposes. To verify reasonability of charges by category, in accordance with the requirements of the various Bills (Bill 210 / Bill 4 / Bill 100), Inergi's client is entitled to collect from the IESO the net difference in revenue between the amount billed to its Business Partners at RPP versus amount that would have been billed using the spot price. The difference in the amount billed at RPP and the amount at spot determines the monthly declaration amount to the IESO. This is the amount that is computed and reported on the declaration form by Inergi's Wholesale Settlements Unit, and submitted to for approval and submission.

Calculation of Inergi's Client's Total Usage and Cost of Purchasing Power for the Month

Inergi's client's business unit purchases power from the IESO, Embedded Generators and Host LDCs. At the time of the declaration, the IESO Invoice is not available and the Embedded Generator and Host LDCs payments have not yet been calculated, so an estimation process is applied. Specifically, estimates are used to calculate the current month's usage and cost of purchasing power. The estimates are trued-up in the following month once the actuals are known.

In estimating the monthly purchases by Inergi's client from the IESO, Inergi Wholesale Settlements:

- Uses the Charge Code Summary which is a summary of the preliminary statements received to-date;
- Downloads the Daily Total Ontario Demand from the IESO;
- Calculates Inergi's client's portion of the Daily Total Ontario Demand for each day where a preliminary statement is available;
- Daily Portion = kWh from preliminary statement / Daily Total Ontario Demand;
- For each day where the preliminary statement has not been received, downloads the Daily Average Ontario Demand and HOEP from the IESO. Applies Inergi's client's portion calculated in previous step to the Daily Average Ontario Demand to determine Inergi's client's estimated usage; and
- Multiplies the estimated usage and HOEP to determine Inergi's client's estimated cost.

To estimate the Embedded Generator and Host LDC payments, Inergi Wholesale Settlements references the previous month's actual amounts from the Cost of Power Report.

The Cost of Power (COP) data and the SAP related GL accounts data are input into an Excel Spreadsheet for analysis through the Monthly COP GL reconciliation. These monthly reconciliations and reports are prepared by the Settlements staff and sent to Inergi's client for review.

Calculation of RPP and Global Adjustment Declaration (kWh and $) for Inergi's Client and Distributor Consolidated Billing Retailers

Inergi's client purchases all kWhs at spot price but sells to some Business Partners at the RPP rate. The difference between what Inergi's client pays for power and collects from the RPP Business Partners is declared to the IESO in accordance with the requirements of Bill 100. If Inergi's client pays more than is collected from the RPP Business Partners, the difference is reimbursed to Inergi's client by the IESO. If Inergi's client collects more from the RPP Business Partners than is paid, Inergi's client must return the difference to the IESO. The net difference between these two amounts is tracked monthly and recorded in Inergi's client's regulatory accounts for future settlement.

In addition, Inergi's client is charged/credited a Global Adjustment for all energy bought. However, the Global Adjustment is not passed on to the RPP Business Partners. Therefore, the Global Adjustment charged / credited for the RPP portion must be declared to the IESO. If Inergi's client is charged the Global Adjustment, the IESO must reimburse Inergi's client for the RPP portion charged. If Inergi's client is credited Global Adjustment, the RPP portion must be returned to the IESO.

Receive Embedded LDC and Retailer Data to be Declared

Embedded LDCs and Retailers who are not market participants are required to fax their declaration to Inergi's client's business unit 2 days prior to the IESO deadline. The values declared by the embedded LDC and Retailers are entered into the Bill 100 Calculation Spreadsheet.

Submission of Declaration to IESO

Once the RPP declaration calculations for Inergi's client, embedded LDCs and retailers have been aggregated, the IESO declaration is completed. The calculations and form are reviewed and approved by Inergi Wholesale Settlements management and client Revenue Management, Customer System Planning Policy and Customer Care. Once approved, the form is submitted to the IESO.

Reconciliation Process

When the IESO Invoice is received, the amounts declared by Inergi's client are reconciled with the amounts included on the IESO Invoice. In addition, Inergi Retail Settlements adjusts the embedded LDC Invoice as per the embedded LDCs declaration and any required transactions between the Retailers and Inergi's client are processed by Inergi Wholesale Settlements.

Manage Accounts Receivable

Inergi's client has contracted with Symcor Inc.[3] to process energy payments on its behalf. The Business Partner payment information is utilized by CCC in managing the energy accounts receivable under the terms of the Inergi outsourcing agreement.

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[3] Controls relating to Symcor and TD-Canada Trust bank are out of scope for the purposes of this report.

Cashiering Process

Inergi's client's Business Partners normally make payments through the mail, via phone or electronically (i.e., credit card, internet banking or PPO). In certain extremely rare situations (e.g., Business Partner cut-out for non-payment), Inergi's client's field staff may accept cash payments from client Business Partners, and such transaction are subject to client-established policies and procedures. Inergi's client is responsible to determine compliance with procedures regarding cash receipts accepted by client field staff.

Daily Mail Bag

The daily mail bag is obtained from Symcor Inc. and is delivered daily via courier service by 10:00 AM to the London outgoing mail room, and the London CCC Inergi LCCC is responsible to distribute the items. The Symcor Inc. bag is placed in the outgoing mail room by 3:00 PM and picked up daily by courier service. A separate courier is sent to Inergi LCCC, Cashiering Department, for any mailed or couriered payments received in the Inergi CCC, Markham location. This courier will have a 1 business-day delay. The Inergi LCCC Agent is responsible to pick up the mail bag each morning. If the bag is not sealed or there are missing items, the Inergi LCCC Agent will notify the Inergi CCC Team Coach who will notify the Symcor Inc. The bag is sorted and the contents of the bag are delivered to the appropriate person/department. The bundle from the TD-Canada Trust bank (TD bundle) from Symcor Inc. may include the following:

- Outstanding Issues Report;
- Void Item Report – Worked by Inergi Cashiering Agent;
- Stop Payment Report – Worked by Inergi Cashiering Agent;
- Online Issues Report – Worked by Inergi Cashiering Agent;
- Paid No-Issue Report – Sent to Inergi's Finance Department;
- Paid Exception Report – Sent to Inergi's Finance Department;
- Paid Items Report – Sent to Inergi's Finance Department;
- Paid File Balance & Issue File Balance Reports – Sent to Inergi's Finance Department;
- TD-Canada Trust Bank Statement – Sent to Inergi's Finance Department;
- Supplemental Paid Items Report – Sent to Inergi's Finance Department; and
- Debit / Credit Adjustments with Refund.

Mail Payments

Inergi's client's Business Partner's payments are received daily through the mail. All payments received in the Markham CCC are couriered to the LCCC. Government cheques are separated and client's Business Partners will be called to obtain breakdowns of payments. Inergi's client's Accounts Receivable (AR) is contacted for breakdown of any AR payments received in the mailbag.

Symcor Inc. receives mailed payments from Canada Post each day Monday through Friday. Payments can be either for Inergi's client's Business Partner's energy charges or non-energy charges. These payments are delivered to a post-office box under Inergi's client's name. "Station A" identifies that it is for Inergi's client. Markham CCC will send the payments via interoffice mail to LCCC. LCCC will then send payments via courier to Symcor Inc. For payments received that are greater than $10K, a "Billing Payment" interaction record must be created on the applicable contract account prior to forwarding onto Symcor. The Interaction record must include the details regarding payment amount and payment date. Symcor Inc.'s control measures are outside the scope of this Report.

Envelopes are opened and items extracted in preparation for processing. Invalid payments (i.e., incorrect payees, post-dated / stale-dated payments, correspondence and cash payments) are out-sorted for special handling or return to LCCC. A Daily Processing Report detailing payment information is printed from the remittance application for Inergi's client. The payment file application is then used to extract balanced batches from the remittance application for Inergi's client's Business Partner. The payment file application produces a Credit Report, which is balanced to the Daily Processing Report to determine that all payments processed have been extracted accurately. Once these reports have been reconciled, the files are faxed to Inergi's client's Treasury Department, and a confirmation will be received. All cheques are run through the reader / sorter machines once all the files have been uploaded to Inergi's client. Cheques are MICR (i.e., Magnetic Ink Character Recognition) encoded with the payment amount and endorsed. A cash letter, detailing the amount of the cheques processed, is automatically produced and sent with the cheques to Symcor Inc. for processing and clearing.

The total of all Automated Payment Advices (APAs) and adjustments processed during the day is balanced against the listings of all APAs received from Financial Institutions. Any differences are investigated as appropriate and are sent to Inergi LCCC.

Inergi's Accounts Analysis Group receives details on cash receipts and is responsible for balancing Inergi's client's bank account to SAP files. A daily report is generated by SAP with mismatched information (e.g., Business Partner account number) and is posted to a suspense account for clearing by the Inergi's LCCC staff. . Symcor Inc. is responsible for sending the backup for this report including a copy of Inergi's client's Business Partner's cheque and or remittance. LCCC agents review the report received from Symcor and work on the same on a daily basis. All items received from Symcor can be viewed in the form of a work list in SAP. The work list in SAP is updated based on the Symcor report. The Agent working the report will investigate the payment to obtain an account number for Inergi. Once the account number has been found, the payment is transferred from the suspense account to Inergi's client's Business Partner's account. If no resolution is found, agent will call the contact of the payment to identify the account that the payment applies to. The Business Partner details and amounts are verified in SAP before being transferred to appropriate Business Partner account. For those payments that are received through telebank/credit card, CCC agents co-ordinates with Bank to get the requisite confirmation information.

Information received indicates the suspense accounts are reconciled (i.e., zero balance or amounts are accounted for). The LCCC Agent, Supervisor and or Team Coach reviews the reconciliation on a monthly basis. The Excel Spreadsheet includes a detailed description of each item and the actions taken as well as the status of the item. LCCC staff determines that the amount on the Spreadsheet is the same amount in the suspense account.

The following are a list of suspense accounts that are reconciled via an Excel Spreadsheet:

- 15 Bank Refund Suspense Accounts;
- Inergi's client Accounts Receivable;

- Cash Suspense Account;
- Inergi's client 3rd Party Deposits; and
- Cashiering Unidentified Payments.

Electronic Payments (PPO, credit card, internet banking)

Inergi's client's Business Partners can establish electronic payments through one of the following three channels:

- Pre-Authorized Payments Option (PAP);
- Credit Card Payments; and
- Telephone Banking/Internet Banking (Online Banking).

Pre-authorized Payments (PAP)

Business Partners may sign up for Pre-Authorised Payments (PAP) either online with the eCustomer web portal or by completing the pre-printed application form. The Business Partner's banking details is stored against the Business Partner account information; if the Business Partner has more than one contract account a separate application must be completed for each contract account that is to use PAP. Once setup the Business Partner is responsible for initiating any changes to their banking information, this includes changes as a result of bank actions such as restructuring branches and the associated routing numbers.

Within SAP a 'register' of valid bank identifiers is being maintained. This limits the ability to enter an incorrect bank & branch number as part of the Business Partners PAP information.

After the Business Partner has signed up for PAP, SAP will ensure that no draft will occur until the due date of the invoice created subsequent to signing up for PAP, this invoice advises the Business Partner that their account is to be drafted. The SAP payment run will be used to update the Business Partner's account with the payment document and also to generate the file sent to TD Bank with all of the draft information. This file will be created and sent to the bank two days prior to the due date in order for the bank to process the payments on the due date.

Business Partners will have a cash management grouping on their contract account master data. The grouping will be defaulted when the contract account is created. When a Business Partner signs up for PAP this grouping will be changed to a grouping only used by Business Partner's on PAP, if the Business Partner enrolls in PAP via eCustomer the update will be automatic, otherwise it will be changed manually when the Business Partners banking information is entered.

Inergi's Client's Treasury will then be able to view the projected PAP receipts using standard SAP reporting within SAP cash management.

Return / Rejected PAP Payment

The Electronic Funds Transfer (EFT) Returns, EFT Report and the EFT Return Item Advice from Bank Centre Report File are used when Inergi's client's Business Partner's PAP payment has been returned by their financial institution. The Inergi Cashiering Agent needs to adjust the account and post the returned item to the account. When this correction is made, the reason code within SAP will indicate Returned PPO, with the applicable reason (i.e., NSF, account closed). The Inergi Cashiering Agent attempts to contact the Business Partner to advise of the adjustment and to obtain the correct banking information. If they are not successful, a message is left for the Business Partner indicating their PPO has been rejected and a new form is being sent to them. Inergi's client's Business Partner's account will then be removed from the PAP payment option. All actions taken by the Cashiering Agent are documented in a contact note to provide details of return. The Report is completed in the Cashiering Department and filed by month. Inergi's Finance Department periodically reviews files from Cashiering, including PAP Returned Items and PAP Rejected Items files by month. The Finance Department advises the Team Coach that they are borrowing the files and returns them when their work is complete.

EFT Large Transactions Report

Every Monday the EFT Large Transaction Report is printed by the BCC Agent, who is assigned, at the printer in the BCC. The report is delivered to the Agent assigned to reviewing all accounts printed on the Report. The assigned Agent goes into each account and reviews the account to determine why the amount of the bill is $2,000 or more by reviewing contact notes and different screens within SAP. Large commercial or interval accounts will appear on this Report, but are not reviewed as most of their bills are more than $2,000. All other accounts are investigated further. If there is an explanation on the account that would validate the large withdrawal amount, such as bills every month are around the same amount, seasonally the account has a large amount billed, contact on account noting that the Business Partner has received the bill and has already called to get explanation, the account can be crossed-off the report. If there is no explanation on the account as to why the withdrawal amount is so high, the Business Partner must be contacted via phone call to determine that they are aware of the pending withdrawal. If they cannot contact the Business Partner, the pending withdrawal must be deleted. After all accounts are reviewed, the PAP Large Transaction Report is filed and kept with the BCC's assigned Agent.

Inergi's Accounting Services Clerk, Accounts Analysis Group, performs a daily reconciliation of all monies received in the Automated Remittance Processing (ARP/PAP) bank account with the amounts recorded in SAP to determine completeness, existence and accuracy of receipts in the SAP. Month-end reconciliations are sent to Inergi's client for review. The Accounting Services Clerk performs a daily reconciliation of all monies received in the Electronic Funds Transfer (PAP) bank account with the PAP amounts recorded in SAP to determine completeness, existence and accuracy of receipts in the SAP. Month-end reconciliations of these Energy related Bank accounts are sent to Inergi's client for review.

GL Transfer

Inergi's Accounting Services Clerk, Accounts Analysis Group, performs a monthly reconciliation between the Energy Accounts Receivable sub-ledger and General Ledger in SAP. This reconciliation verifies that information from the Energy AR sub-ledger was transferred successfully to the GL. The reconciliation is reviewed and approved by appropriate independent Inergi personnel as indicated in the Account Control listing provided by Inergi's client.

Telephone Banking / Internet Banking Online Banking

Inergi's client has made arrangements with most major financial institutions to accept payment of Inergi's client's Business Partner electricity bill. This service exists for Business Partners who participate in online banking. Business Partner can pay by phone/internet by contacting their financial institute to register their account and billing information with the bank. A payment consolidator acts as the payment distributor between the Business Partner's bank and Inergi's client. LCCC receives a file (TDTELPAY and SYMCORREPORTS) every morning that verifies who made the payments, and identifies those payments that went to the suspense account. This file is sent to LCCC from the TD Bank. Once the file has been reviewed, it is filed for future use if required.

Credit Card Payment / Chargeback

Inergi's client's Business Partners have the option to pay by credit card. Markham/London CCC staff process payments via credit card for Visa and MasterCard only. Business Partners can make payments using a US credit card (Visa or MasterCard). The TD Web Terminal system processes the payments in Canadian dollars only and is applied to Inergi's client's Business Partner's account based on the current exchange rate on their US credit card statement.

Agents will retrieve the TD Beanstream website and follow the required process ensuring all fields in yellow have been entered.

If a Credit Card report is required, the LCCC Cashiering Department has the functionality to print a report from the TD Web Terminal. This report is used to verify a mis-posted payment or to identify payments that have gone to the suspense account. Markham / London CCC Agents accept payments for credit cards when Inergi's client's Business Partner is in active collections with a C or D rating, or when Inergi's client's Business Partner is moving out and agrees to pay any unpaid balance or prepay based on their average monthly bill amount towards their final bill. If the Business Partner does not wish to prepay, they can wait until bill is received and call back to make the payment by credit card.) Credit Card Payments are only offered in the above scenarios and are not offered as a standard payment option.

If Inergi's client's Business Partner disputes the Inergi's client charges on their credit card statement, a Chargeback is done. This will reverse the disputed sales transaction. The transaction is debited from Inergi's client's bank account and Inergi's client's Business Partner account is also debited to reflect this. LCCC will retrieve a Sales Draft Request from the issuing credit card company and will require Inergi's client to provide a copy of the sales draft with the Business Partner signature and the CCC will provide a copy of the transaction search. The LCCC has eight calendar days to provide details back to the requester. Sufficient time is required in order to defend the charge. Once the Chargeback has been processed by the LCCC against the account in SAP, the payment reversal will show as 'Debit Memo' in SAP.

Cash Payments

There may be situations where Inergi's client's Business Partner makes payments via cash. The LCCC Cashiering Department is required to process these payments. The Cash Payments package consists of a copy of the Deposit Slip from the bank, a printout of Inergi's client's bank account showing the deposit, and a print screen showing the payment on the appropriate account. Occasionally, Cashiering is asked by Inergi's client's Customer Relations Centre (CRC) to receive and apply a cash deposit for a Business Partner. This only happens on an exceptional basis. If a request is received from CRC indicating they have received a cash payment, the cash is sent via Purolator to the LCCC Cashiering Department.

Cash payments are also received in the mail from Business Partners and are deposited manually. Since this is not the correct payment process, Inergi's client's Business Partners are contacted to notify them of correct payment methods and options.

A Cash Payment Package is required to determine that cash payments are deposited to Inergi's client's bank account as well as applied correctly to the appropriate account in SAP. The Cashiering Department will receive the cash and fill out a deposit slip to be made to Inergi's client's bank account at TD Bank. The deposit slips are kept in the lock box used for storing cheques during the day. The Cashiering Team Manager will take the cash and the deposit slip to the closest TD Branch. The Cashiering Team Manager determines that both copies of the deposit slip are stamped by the teller. LCCC will keep the carbon copy of the deposit slip and a copy of the deposit is printed to show the deposit was made.

The LCCC Cashiering Team Coach / Agent follows up in two business-days to determine that the deposit was made to Inergi's client's bank account. Once the deposit has been verified, a credit adjustment is submitted to Symcor Inc. to credit the appropriate Business Partner's account. The Cashiering Agent attaches the carbon copy of the deposit slip, the printout of Inergi's client's bank account, and the printout of the deposit information from SAP. The Cashiering Agent initials and dates the package and files it in the Cashiering cabinet in the file folder marked 'cash deposits'.

Bank Requests

The Bank Request (paper copy) is used when a financial institution requests information regarding a payment, requesting a payment to be transferred or a payment to be refunded back to the financial institution. These Bank Requests can be for payment confirmation, payment transfer or payment refund, and include the financial institution name, contact, payment amount, payment date, Business Partner's name, and the nature of the request. A Spreadsheet for each refund being issued to banks for invalid bank payments is faxed Markham the day before the refund prints. The Markham BCC Agent attaches the back-up to the cheque the next day for each bank and couriers it to each bank. These refunds are also be recorded in the Held Cheques log and are not couriered out until the status on the log shows as 'release'. Non-service accounts are set up for each financial institution to which payments may need to be transferred.

Bank Returns and Exceptions

Inergi's client's bank account is to be debited the same amount of returned cheques that Symcor Inc. has processed, and if there are any discrepancies implements processes are followed.

The Team Coach in the LCCC Cashiering Department is responsible for completing this task daily and requires access to the shared drive in order to access the Bank Returns & Exceptions Spreadsheet and the TD application. Once the adjustments are completed in SAP, the information is sent to Inergi's Finance Department. The LCCC Cashiering Department prints out the bank statement for the day to match with the date on the returned cheques. The total dollar amount of the total number of returned cheques is posted as 'Returned Cheque' in the bank statement. If the amount is not the same, the LCCC Cashiering Agent lists the two totals on the Bank Returns & Exceptions Spreadsheet. Any items which are listed on the recap sheet that account for an unbalanced transaction are given to the LCCC Cashiering Agent. The Agent works the debit / credit adjustments and these items are then recorded on the Bank Returns & Exceptions Spreadsheet. All other debits and or credit adjustments which are listed / posted on the bank statement are also recorded on the Bank Returns & Exceptions Spreadsheet with a brief explanation (i.e., missing items).

The LCCC Cashiering Department receives Debit and Credit Advice Slips from Inergi's client's lead bank. Each individual debit in the bank statement should match up with one of these Debits or Credit Advice Slips. If the Debit or Credit Advice Slip is not sent within 30 days, a copy is requested from the lead bank. The LCCC Cashiering Department investigates the Debit or Credit items and applies the required adjustments to the SAP accounts. Once this is done, any manual adjustments are sent to Symcor Inc. If there is no adjustment required to SAP, a folder is created and marked "no adjustment" to SAP, and filed in the Cashiering Cabinet. Once the adjustment has been completed in SAP, a copy of the advice, a copy of the debit / credit manual entry request sheet, a copy of the SAP Business Partner account retrieval screen, and the payment screen confirming the adjustment is sent to Inergi's Finance Department via interoffice mail. These documents are also saved in the Debit or Credit Adjustment folder.

Refunds

Refunds requests can be system generated by Inergi's client's Business Partner final bill, or manually initiated by Inergi CCC/BCC Agents, when a Business Partner calls the Customer Contact Center, or when CCC/BCC Agents complete adjustments on an account where Inergi's client's Business Partner has been excessively over-billed. There must be an excess credit on the contract account to process a refund in SAP. Prior to completing the request for a refund, the Agent must validate the appropriateness of the excess credit on the account. The verification for refunds (other than bank refunds), includes a search for active accounts with the same Business Partner information (i.e. name, premise identification) and, if found, the CCC/BCC Agent transfers the dollars. If no other active accounts are found, cheques are produced for credits on final bills based on a transaction request by the CCC/BCC agent, and are applied to the Business Partner account only after review and approval per the OAR.

Refunds can also be initiated by a request from a bank/financial institution. Such requests are called bank refunds and are honored except if the refund is for a cheque payable to Inergi's client and the Contract Account is in collections or there is a balance outstanding on the account. If a refund request is questionable, i.e., payment received is the same amount owing, further information is required from the financial institution prior to the refund being approved. Once the refund request has been verified, a cheque is produced and applied to the Business Partner account only after review and approval per the OAR

Refund cheques are issued centrally by batch processing in two different jobs. The Batch occurs nightly, Monday to Friday, and the cheques are printed the next business morning. Refunds under $500 are mailed the same day they are printed, and all other refunds are verified and approved following the Decision and Limits for Supplier – CSO and are usually sent out the next business day.

Refund Approval Authorization Levels

- < $500 – Cashiering Agent, Inergi
- $1,000 filed by month Team Coach, Inergi
- $5,000 filed by month Team Manager, Inergi
- $10,000 – Customer Service Manager, Inergi
- $15,000 – Vice President, Inergi

- >=$15,001 – Inergi's client

The Cheque Reconciliation Package is used to determine that all refunds $500 and larger are audited by the appropriate signing authority. The completed package is filed by month in the Cashiering Department. A Cheque Reconciliation Package may include some or all of the following depending on the stage of the process that the record is in:

- RF1SQL (Setup List) and RF2SQL (Issued List) reports;
- Summary notes for all of the $500 and larger refund cheques;
- Numbered pages and a numbered summary for each cheque;
- The cheque number, account number, date, amount and the audit summary notes; and
- Space for sign-off by LCCC Agent, Team Coach, Team Manager, Customer Service Manager and Director.

Printing of Refunds

Upon completion of the nightly batch, RMDS will generate two lists (Setup List and Issued List) which indicate refunds issued. The Setup List is reviewed for any refunds meeting the defined criteria. The Cashiering Agent reviews the individual account to determine if the Business Partner has an active account. If an active account is located, the refund is voided and a transfer credit is completed to the active account. The Issued List is reviewed to identify any refunds that are over $500. These refunds are numbered in numerical order.

The Daily Cheque Printing Register is used to determine that the cheque stock has been audited by the BCC Team Coach to determine that the correct cheques print in sequence, and that there are no missing cheque numbers in the stock that will be used. If there are any problems with the sequence of the cheques, the Team Coach is advised. The CCC Agent/Clerk periodically checks all refund cheques as they are printing to avoid sequencing problems during the cheque run. For security reasons, refund cheques must be kept in a secure location. When printing and working with refund cheques, the CCC Agent/Clerk is present at all times. If the CCC Agent/Clerk leaves this location for any reason it is their responsibility to place the cheques in a locked cabinet during the day and in the vault overnight.

If there are problems with the cheque printer, the CCC Agent responsible for printing cheques, informs the BCC Team Manager, who will contact the Helpdesk to advise. The Helpdesk notifies the correct parties to have the file redirected to another IBM Printer either in Business Support or in the Lower Concourse of the building and notify the BCC Team Manager of the printing location. The CCC Team Manager advises the Agent. It is the responsibility of the BCC Team Manager to advise the London Team Manager who is responsible for the Cashiering function of the delay if any has been experienced due to the failure of the printer.

Refund Cheque Stock

The level of Refund Cheque Stock is monitored and if required, notification is given to the Purchasing Manager in Inergi who is responsible for ordering new Refund Cheque Stock. When the Refund Cheque Stock is running low in the BCC, (3 months supply or 12,000 cheques which are 6 boxes), the BCC Team Coach advises the Inergi Purchasing Manager via email that more Refund Cheque Stock is required. The Inergi Purchasing Manager places an order to the vendor. The Inergi Purchasing Manager is notified by Inergi's client's Markham Receiving (Facility Services) when the Stock has been delivered to the shipping dock at the Markham building (currently the Facility Services). A physical count and a visual quality review are performed to compare the stock to a specimen cheque provided by the Inergi

Purchasing Manager. The Inergi Purchasing Manager advises Inergi's client's Facility Services personnel to deliver the Stock to the BCC Team Coach. Once the review is complete, the Inergi Purchasing Manager reconciles the order form to the packing slip. If there is a discrepancy or a quality issue as indicated in the specimen cheque, the Inergi Purchasing Manager follows-up with the vendor. If the items on the 'order form' match the items on the packing slip, the Inergi Purchasing Manager initials both forms and attaches them together, dates them and files them in the 'Refund Cheque Stock File'.

Cleared Refunds Exception Report

The Cleared Refunds Exception Report is generated in RMDS. It identifies refunds that have been cleared at a financial institution that have already been time voided in SAP, because they were not cashed six months after the issued date, and refunds that the financial institution has cleared for a different amount than the refund amount indicated in SAP. The Cashiering Agent investigates the account and determines if SAP has applied a debit to the account for stale-dated cheques or a contact note will be added to advise the refund cheque was cashed for more than the refund amount.

Returned Refund Cheques

Refund cheques returned by Inergi's client's Business Partners are forwarded to Cashiering via courier by Inergi mailroom personnel in Markham. If Inergi's client's Business Partner requests the credit be transferred to another active contract account rather than cashing the cheque, the refund cheque is voided and the excess credit is transferred to the active account. If the cheque is in Inergi's client's Business Partner's name but the payment was made by another Business Partner or someone else and they would like the cheque issued in their name, a request to Symcor Inc. is required to confirm who made the payment. If the payment was made by telebanking, a search is completed through the telebanking records for confirmation. If it is confirmed that someone else made the payment, the refund cheque is voided and the excess credit is transferred to that person's account. If the payment was made by someone who is not a Business Partner of Inergi's client, a non-service account is set up in their name, and the refund cheque is issued on the non-service account so the correct Business Partner is refunded. Contact notes are added to both accounts and both Business Partners are informed with a phone call. If a returned refund cheque is stale-dated, it shows as voided in SAP. The stale-dated cheque is filed in the appropriate folder and the excess credit is transferred to another refund. If the refund cheque was sent to the wrong person and the envelope was opened, an investigation is required to find out why it was sent to the wrong address, and the CCC Agent locates the correct Business Partner's address and resends it. All voided cheques are shredded.

All returned refund cheques that come to the CCC are forwarded unopened to the LCCC Cashiering Department. All returned refunds from Canada Post are investigated to determine if the refund has been voided. If the refund cheque has not been voided then a search for an active account for the Business Partner is performed. If an active account for the Business Partner can be found, the refund is voided and transferred to the active account. If there is not an active account found but the mailing address on the finalled account has been updated, a cover letter is printed and the cheque is sent. If the account has not been updated with a new mailing address and an active account cannot be found the Agent attempts to call the Business Partner to obtain the new mailing address.

Debit and Credit Advice Adjustments

A debit or credit advice (e.g., a carbon slip or a photocopy) is received from Inergi's client's Treasury Department to indicate an exception from the bank. The advice identifies a discrepancy between the bank and Symcor Inc., and is a notification of the change to Inergi's client's account. The bank debits or credits the individual item to Inergi's client's account accordingly. The advice comes to the LCCC Cashiering Department via internal mail from Inergi's client. The Cashiering Agent reviews SAP to determine if the error was made to Inergi's client's Business Partner's account or to Inergi's clients' bank account. Once this has been determined, the Agent follows-up with the bank or Symcor Inc. to have the payment traced, posted correctly or request more information. The Agent determines that SAP and Inergi's client's bank account match.

Notifications of errors are sent from Symcor to the LCCC, to advise an error has occurred in the posting of a payment and a correction is required. The Cashiering Agent reviews Inergi's client's Business Partners' account to determine the error and then send the Debit or Credit Return Item Adjustment Form along with a copy of the notification of the error back to Symcor. Symcor will return the original form back to LCCC when corrections have been made.

Reconciliations

To determine the completeness and accuracy of payment posting process, Inergi's Accounts Analysis Group and Inergi's CCC Cashiering Department prepares a Daily Cash Balancing Report which reconciles the daily cash deposit amounts posted to SAP to the amount posted to Inergi's client's general ledger.

The Daily Cash Balancing report is prepared utilizing InfoPac by the Revenue Reporting Group, and through review, all differences are investigated and resolved. These differences are tracked via a SAP audit trail. Most reconciliation issues in the Daily Cash Balancing Report can be tracked using the SAP audit trail and resolved by calling the Help Desk to assist in batch processing issues or whatever source has been identified through this investigation. All reconciliation issues which require this type of investigation and intervention, though rare, are documented and reviewed by Revenue Reporting management.

Cash – Daily Balancing

Inergi's Senior Financial Specialist, Accounts Analysis Group reconciles bank activity and the SAP details monthly.

System Controls

System Interface controls between SAP and Symcor systems also determine that all receipts have been completely and accurately recorded in SAP from Symcor. A compressed file is received daily from Symcor and loaded into SAP automatically. Another file (i.e., Trailer File) containing the same data is also received from Symcor and the total is validated against SAP to determine that all records are loaded.

System Interface controls between SAP and TD Beanstream Credit Card System determine that all credit card receipts have been completely and accurately recorded in SAP. Files are received through TD Beanstream (Automated Payment Exchange System). This interface is monitored daily by Inergi through the Cash Interface Summary file to determine that all records in the TD Automated Payment Exchange System Report have been loaded into SAP.

The receivables and collection process records the amount of receivables from Inergi's client's Business Partners. These amounts are recorded in SAP when the EUC are billed. The two areas for this process are active accounts and finalled accounts. If Inergi's client's Business Partner's account has been flagged within SAP with a Priority Level of Critical / Life Support or Sensitive, have an outstanding balance greater than $5,000, there are environmental issues (i.e., mines, sewage plants, CN) or the account is registered with a Retailer on the Retailer Consolidated Billing (RCB) bill option, they are sent for Office Review by a Manager or Team Coach of Inergi CCC.

Allowance for Doubtful Accounts (AFDA)

On a monthly basis, SAP automatically calculates the provision amount as per rates defined by Inergi's Client and creates a journal entry to the GL account and posts the amount of provision according to the table below:

1-39 days	40-69 days	70-89 days	90-179 days	180-269 days	270-364	1-2 years	Over 2 years
9%	17%	50%	50%	50%	50%	100%	100%

The rates defined above include both Active and Inactive accounts but excludes credit balances and deferred budget billing amounts. In case of additional provisioning required, a manual journal entry is prepared and posted to the SAP GL by the Senior Finance Specialist based on approval from Inergi's Client's Revenue Management.

An aging report in SAP is generated which details debtor's outstanding balances greater than 90 days. On a monthly basis, the Senior Financial Specialist, Account Analysis group reviews and approves the Aging reports as per below:

1. Independent validation of SAP AFDA GL account using raw AR data in SAP.
2. AR balances for Contracts >=$500k (Debit balances)
3. AR balances for Contracts <= ($100k) (Credit Balances)

The Aging reports are further provided to Inergi's client's Financial Advisor for approvals.

Security Deposits

Inergi's client has provided direction that there is to be no preferential treatment in the application of the Security Deposit policies. Security deposits are be applied to a Business Partner's account either automatically by SAP upon enrolment of the account (Refer to the Enrolment process narrative) or through automated reviews performed by SAP based on a pre-defined criteria provided by Inergi's client. Security deposits are assessed on accounts based on the Good Payment History (GPH) of the Business Partner. Criteria for GPH have been pre-defined by the Ontario Energy Board (OEB) as follows: No more than one returned cheque or EFT due to insufficient funds (i.e., not due to Inergi's client error); No more than 1 Disconnection Notice letter (i.e., not due to Inergi's client error); and No collection or disconnect trips (i.e., equivalent to a completed Cut-Out Order meaning a trip has been made to the property) (i.e., not due to Inergi's client error). Business Partners have the option to pay off their security deposit requirement via cash, cheque and/or Deposit Alternative, or pay the security deposit off in installments (i.e., maximum of 6 installments for monthly billed Business Partners, 3 installments for bi-monthly billed Business Partners and 2 installments for quarterly billed Business Partners).

Deposit Alternatives are defined as Letters of Credit per the OEB, an acceptable form of Deposit Alternative must be an Automatically Renewing Irrevocable Letter of Credit (LOC) from a Chartered Canadian Bank or Credit Union or Band Guarantee. These are issued by the Federal Government. Specific accounts/individuals are documented within the Band Guarantee, or Letters of Guarantee. These are issued by a third party to guarantee payment of arrears on the account. All relevant data regarding the Letter of Guarantee is documented in a contact note on both the Guarantor's account and the account for which this Deposit Alternative exists. All Deposit

Alternatives are locked in a safe, in the Inergi London location, each night. If an account has been finalized and paid in full, the original Letter of Credit is returned to the financial institution. A copy is filed in London and a contact is added at the Contract account level documenting the action taken.

Per the designed process, the Good Payment History for Business Partner Contract Accounts with Deposit Alternatives on file is to be reviewed manually by a CCC/BCC agent two months prior to expiration date on the Letter of Credit. Any changes in the GPH assessment that results in a corresponding change in the amount required in the Deposit Alternative above the threshold established by Inergi's client will result in the return of the Letter of Credit or an increase of deposit amount. There is a known defect (Defect 13272) in SAP that needs to be resolved to address a flaw in the logic that is being used to simulate the GPH assessment. As a result, this annual review is not currently being conducted.

When a deposit is applied to a Business Partner's account automatically by SAP, the Business Partner is provided with the options available to reduce or remove the deposit. Once the Business Partner provides the required information, the Inergi CCC Agent assesses the information provided by the Business Partner to determine if the deposit will be removed or reduced, based on predefined criteria provided by Inergi's client.

When SAP assesses a deposit to an account, it reviews to determine if the Business Partner has met the pre-defined criteria for GPH within relevant time period. Relevant time period is defined as: Residential Business Partners = 12 months of GPH, -General Service < 50 kW Business Partners = 5 years of GPH and General Service > 50 kW Business Partners = 7 years of GPH. The account classification determines the appropriated relevant time period. If the Business Partner has met the required GPH, no deposit is assessed to the account and, if there is a deposit existing on the account, it is refunded.

Annual Review

Per the designed process, the Good Payment History for Business Partner Contract Accounts with cash deposits on file is subject to an Annual Review which occurs each year on the account's 'Anniversary Date', which is the date the deposit requirement was paid in full. On a monthly basis, a SAP batch job is run to identify Residential accounts with security deposits to determine if the deposit should be fully refunded due to good payment history, partially refunded due to a reduction in electricity use, increased due to a change in electricity use, or remain unchanged. Staff manually reviews the account data to validate whether the deposit on hand is eligible for a partial or full refund. The eligible accounts are sent to Inergi's client for approval. The approved list is processed manually. The Good Payment History for non-Residential Business Partner Contract Accounts with cash deposits on file is not subject to an Annual Review.

Collection Process

Collections Process (finalled accounts)

For finalled accounts, SAP is configured to automatically write off balances after 90 calendar days from the date of final bill due date. Once SAP writes off the accounts are forwarded to the collection agency for further follow-ups excluding the accounts in the below categories:

1. Contracts Accounts with a balance less than $15
2. First Nations Account (when identified by collection strategy)
3. Remote Communities
4. Inergi's Client's affiliates

5. Ontario Power Generation Account (OPG)
6. Government Offices

On a monthly basis, Inergi generates the Bad Debt Summary report that lists Contract Accounts with an outstanding balance greater than $5000 that were written off during the prior month. The Contract Accounts are reviewed by Inergi and Inergi’s Client via the “Approval to Write Off to Bad Debts” form prior to being sent to the Collection Agency.

If the Agency is successful in recovering the Accounts Receivable balance, the payments in the form of cheques are received from the Collection Agency. When cheque payments are received from the collection agency, the CCC staff randomly audit the cheques received to the list of accounts and outstanding balances received from the collection agency. The team manager reconciles the accounts to the corresponding cheques. Inergi’s Client is responsible for reconciling the payments received (recovered from Business Partners) from Collection Agencies against the monthly statements received and resolve discrepancies if any.

Collections Process (active accounts)

If a Business Partner’s account is in arrears for a period of time established by Inergi’s client, the Contract Account is added to the Eligible to Cut List. The Eligible to Cut List is a report created by SAP, prioritized by dollar value, and reviewed Inergi LCCC Agents.

Non-Energy Billing

Non-Energy AR generally arise from Inergi’s client Customer service upgrades and new connects, surplus and salvage asset sales, lease or license agreements associated with the secondary use of Inergi’s client’s owned lands, as well as contract and project work. In addition to invoicing for non-energy revenues, Inergi’s role in relation to non-energy AR also includes applying the cash/payments received against outstanding AR and the ongoing collection thereof.

Inergi’s client has contracted a Collection Agency for collection of non-energy invoices of $2,000 and less Inergi's client is responsible for managing the collection process of aged non-energy accounts.

Customer Invoicing

Non-energy billing is maintained through contracts. Where contracts are not maintained, work orders are created for invoice generation by Inergi’s clients’ field staff. Based on the work orders or the billing schedule specified in contract, SAP is configured to automatically generate sales orders, and invoices for the work orders created through scheduled batch program. The invoices are related to charges for work completed by Inergi’s client’s operation centre personnel and do not reflect any energy charges. Inergi’s client’s field personnel document the miscellaneous charges in a contact for Inergi CCC staff to provide information to the Customer. If the Customer has questions about the charges and there is no information available, Inergi staff will advise the caller to contact Inergi’s client’s Accounts Receivable department. Inergi’s client is responsible for invoicing payments on all non-energy charges. For Time & Material and Damage Claim work orders, Inergi AR Clerks verifies information in SAP against actual or estimates provided by Inergi’s client. Unexplained variances are sent to Inergi’s client for resolution and followed up by Inergi AR Clerks. Inergi AR Clerks generate invoices in SAP, and update the price on the invoice based on information provided by Inergi’s client. These invoices are verified for accuracy of input and signed off by an independent member of the Non Energy Billing team. If the invoice has a prepayment that exceeds the amount of the invoice, this will result in a credit balance being owed to the customer, which is referred to as a Credit Invoice. Credit Invoices are processed by Inergi Accounting Clerks as refunds.

Late Payment Charges

All Non-Energy bills for Business Partner accounts with outstanding balances on the last fiscal day of the month are subject to Late Payment Charges (LPC). SAP automatically applies LPC via a monthly batch process.

Batch Processing

On a daily basis, a member of the Accounts Reconciliation & Asset Management team reviews the log report from SAP for all batch jobs (pertaining to AR) run on the previous business day to determine that all batch jobs were executed error free. This includes the monthly LPC batch job. Any errors noted are escalated to appropriate person for resolution. Log reports generated are saved separately as an evidence for review. Inergi's client maintains additional non-energy related Customer account information in SAP and the Customer Service systems (e.g., more comprehensive information as to services / work provided, contract information or delivery of customer service). Inergi's client is responsible to advise Inergi if any changes are required to the Customer Master accounts maintained by Inergi in SAP, including any details related to Customer accounts maintained by Inergi's client in the SAP system.

Inergi's client's field office staff is responsible for contract/work requirements and, generally, requires full payment for work (new connections and upgrade work only) to be completed before project work commences. Contracts are created / updated in SAP based on approved requests received from Inergi's client. Based on the billing schedule specified in the contract, SAP has been configured to generate recurring invoices automatically. Inergi's client submits the Customer prepayment with a completed Remittance Advice form providing pertinent details as to the Customer account, billing address, etc. On receipt of remittance advice, payment is processed by the AR Clerk and the same is parked into one time Customer account.

Cash Application

Payments for Non-Energy invoices are received via cheque, credit card, wires, EFT, money orders and, occasionally, cash. Inergi's client submits the Customer prepayment with a completed Remittance Advice form providing pertinent details as to the Customer account, billing address, etc. On receipt of remittance advice, payment is processed by the AR Clerk and the same is parked into a one-time Customer account. SAP is configured to match prepayments with the invoices generated based on the work order reference in both the documents. Invoices / Billing documents and credit notes are automatically posted to the proper account in the General Ledger (i.e., Revenues, Account Receivables, Project Costs).

SAP has been configured to write-off invoices automatically where there is a mismatch of $15 or below between prepayments and invoices.

Inergi's client is responsible to review and manage the mismatch provision account related to prepayments and for clearing mismatches above $15 related to prepayments and invoices.

The AR Clerk applies Non-Energy Customer payments to Customer's accounts using either the invoice stub, cheque references, payment forms, EFT notifications or wire notifications supplied by Inergi's client, Inergi's client's Customer or the bank.

The AR Banking Clerk also reviews the bank statement the next day to determine that the previous day's deposits are recorded and any discrepancies are investigated. Any cheques received subsequent to the courier pick-up are locked overnight in a safe. The combination to the safe is only known by the AR Department Manager, Supervisor, Banking Clerk and the backup Banking Clerks.

Daily Cash Balancing

Daily cash balancing is also performed by the AR Banking Clerk for both US and Canadian currency bank accounts. Daily cash balancing consists of comparing deposit inputs in AR to the deposits reflected on the TD bank statements accessed online. This is done by accessing the TD Web Business Banking Site and reviewing daily deposit Balancing Reports that are generated electronically for the Canadian $ Bank Account, the US $ Bank Account and the Credit Card Bank Account. Any discrepancies between the two (e.g., items identified on the bank statements but not posted to the AR Sub-ledger, etc.) are followed up with the Bank in a timely basis.

The SAP AR Sub-ledger and FI General Ledger are integrated and entries are updated in the General Ledger and Sub-ledger on a real time basis.

On a daily basis the AR Clerk generates missing FI document report from SAP. This report details the billing documents for which no corresponding FI document has been generated. For resolution, email is sent by AR Clerk to the appropriate person specifying the Invoice reference and the reason as to why the FI document was not generated for the invoice.

On a monthly basis, the Bank Account Reconciliation of the Non-Energy AR Bank Account is reviewed and approved by appropriate independent Inergi personnel as indicated in the Account Control listing provided by Inergi's client, before they are sent to the Inergi's clients' account owner for approval.

The month-end reconciliations for the bank deposits to the AR receipts are reviewed by the Supervisor on a monthly basis.

On a monthly basis, the reconciliation between the Accounts Receivable Sub-ledger and General Ledger in SAP is prepared by a member of the Accounts Analysis Group (Inergi). The reconciliation is reviewed and approved by appropriate independent Inergi personnel as indicated in the Account Control listing provided by Inergi's client.

Security controls within SAP restrict access to data to authorized personnel. Requests for access to the AR module in SAP are reviewed by the Senior Financial Analyst and forwarded to and approved by the Senior Manager, Corporate Finance.

Distribution Generation application cheque processing

A customer submits an application to enroll under the Ontario Feed In Tariff (FIT and microFIT) program, and includes a cheque to begin the Connection Impact Assessment (CIA). The application is received directly from the customer via email or courier by Inergi BCC agent. A BCC agent enters the cheque information (cheque number, amount and date received) into CRM against a project number for the customer as established by Inergi's client. A copy of the Daily Payment Log is extracted from CRM and compared to the physical cheques received by the BCC Team Coach to verify whether the Distributed Generation Application cheque information is accurately entered into CRM. All original cheques listed in this Daily Payment Log and a copy of this log is placed in a sealed envelope and sent via courier to Inergi AR for processing. There may be multiple courier deliveries in any given week. The Inergi AR team enters the relevant information into SAP. The entry is accounted for in unearned revenue. The Inergi Account Analysis group performs an analysis on a monthly basis, comparing the customer transactions in the unearned revenue account against the status of the CIA Business Partner applications in CRM. The analysis is sent to Inergi's Client's for further review.

Accounts Receivable Adjustments / Refunds

Requests concerning refunds, write-off and various AR adjustments are received from Inergi's client in written form through email or hard copy mail.

Preparing Refunds to Customers

A customer refund is initiated when the Inergi Accounting Clerk receives a request from Inergi's client. The reasons for a refund could be a change in material cost, a change in layout, an overpayment by a customer, a cancellation of a job by a customer, or other reasons. All requests from Inergi's client are deemed to be financially approved.

The request may originate when a Credit Invoice is generated for Time & Material Work Order where a credit card prepayment exceeded the amount of the final invoice, resulting in a credit balance owed to the customer.

The request may also originate from an email that is received from Inergi's client field staff. Email requests must include the payment notice form and customer service contract that is the basis for the refund.

The Inergi Accounting Clerk who receives the request investigates the original payment from the customer to be refunded to determine if the method of payment was by credit card or by another method. The refund will be processed according to the method of payment.

Credit Card Refunds:

Credit card refunds are made based on credit invoices or requests from Inergi's client, and are processed based on either the transaction authorization number or the credit card. If the initial method of payment was via credit card, then the refund will also be processed via credit card.

Refunds that are processed based on the credit card number are manually approved by the Inergi Senior Manager, Financial Services, to verify the amount of the refund, the appropriateness of the credit card number, and that the proper supporting credit card documentation relevant for processing are in place.

Refunds that are processed based on transaction authorization number, will be processed via the bank website by reversing the original deposit made using the transaction authorization number. These refunds do not require approval from the Inergi, Senior Manager.

Credit card refunds are processed in SAP by the Cost Accounting Clerk.

On a weekly basis, an independent Accounting Clerk, conducts a weekly verification of the actual Credit Card Numbers processed to ensure they are the same as the Credit Card Numbers approved, that they have been reviewed by the Senior Manager, Financial Services, and that the dollar amount processed is the same as the request.

On a weekly basis, another independent Accounting Clerk conducts a weekly verification based on a listing from the SAP GL account to verify that all credit card refunds were processed against the approved credit card numbers, and that they have been approved.

Other Refunds:

Refunds other than credit card refunds are managed through SAP work flow. SAP has been configured with approvers (per the SOA) for approval of credit memos.

Two levels of approvals are required before a credit memo gets posted in SAP.

Email requests for processing refunds from Inergi's client are received by the AR Clerk. Based on the e-mail request, the AR Clerk creates a credit memo in SAP. On creation the document gets automatically queued to the first line approver (per the SOA) through SAP workflow. Once approved by the first approver the document gets queued up for approval of second line approver.

Once approved by the second approver a credit memo gets posted in SAP. Approvers get notification through email whenever a document gets queued for approval.

Adjustments and Write-offs of Receivables

Adjustments to accounts related to non-energy write-offs (including those related to Late Payment Interest Charges and other write-offs) are made based on requests from Inergi's client. For Late Payment Interest Charges (LPIC), Inergi prepares a summary of the amounts that are to be written off, and processes the write-offs based on pre-approval by Inergi's client. For all write-offs other than Late Payment Interest Charges (LPIC), Inergi's client is responsible to submit requests to Inergi for processing. Write-offs greater than or equal to $50 are approved by Inergi's client; and write-offs less than $50 are approved by Inergi's AR Supervisor. On obtaining approval as mentioned above, the write-off is processed in SAP by the Data Entry Clerk.

Aged Accounts

Non-Energy AR Aging Reports are produced by AR Department for select business units. In addition, a comprehensive Aging Report is produced by the Planning and Budgeting department for the Client's Network Services business unit. Inergi's client uses the Aging Reports for monitoring and managing outstanding receivables, as well assisting in assessing the loss provision balances.

Allowance for Doubtful Accounts (AFDA)

A manual journal entry is prepared and posted to the GL at the month-end by Senior Finance Analyst based on the AFDA amounts calculated and provided via email by Inergi's client.

Maintaining the Customer Master File

The Customer database is maintained within SAP. The Customer number is assigned automatically by the system. System controls do not allow the setting up of a new Customer with an existing number.

Retailer Settlements

When the government deregulated the electricity market in Ontario, it gave consumers the choice to purchase their electricity from any licensed retailer. If a consumer chose not to sign with a Retailer, they would continue to be charged by their Local Distribution Company (LDC). The Ontario Energy Board (OEB) drafted the Retail Settlement Code (RSC) to set the minimum requirements that a distributor and retailer must meet where an electrical retailer provides service to a consumer.

As part of the strategy to encourage participation in the open marketplace in Ontario, the OEB has mandated the use of an Electronic Business Transaction (EBT) system in the RSC. Transactions such as enrollments, requests for meter data, billing data, and payment history will be processed electronically via the Ontario EBT system using eXtensible Markup Language (XML).

An EBT working group was created for Market Participants (those who are authorized participants in markets administered by the IESO) to discuss relevant issues on a regular basis and find solutions so all transactions are processed the same way. The working group created the EBT Standards document that all Market Participants follow for a consistent approach when issuing and receiving EBTs. As required, these standards change through discussion and consensus by the EBT working group.

Receipt of Retailer Line Item

Usage Information Flow

Usage is sent from Inergi's client as an Invoice Bill Ready (IBR) to the Retailer (via SAP EBT) no later than noon of the 4th business day from the scheduled meter read date. The Retailer then calculates the commodity charges based on the contract with the Business Partner. The Retailer submits to Inergi's client the line item charge(s) to be put on the Business Partner's bill no later than two business-days after the Usage transaction has been sent.

Inergi's client does not begin to execute the billing process after receipt of the IBR until the minimum IBR Bill window interval (i.e., currently a minimum of two business-days) has elapsed such that any IBR Cancel transaction or subsequent IBR transaction may be processed if also received within the interval. For clarity, if a Retailer wishes to correct an IBR issued to the Distributor, it will send an IBR Cancel transaction and a new IBR. Any of these transactions that are sent within the response interval (from transmission of the original Usage) are accepted and processed.

Under Distributor Consolidated Billing, should Inergi's client not be capable of issuing the new Usage transaction and receiving the IBR in time for the current Business Partner billing for that Usage service period, the Distributor shall Cancels / Rebills the Business Partner immediately thereafter. The Distributor shall issue a new valid Usage transaction such that the Retailer may provide the IBR response and the Business Partner is rebilled to include the commodity charge. This occurs prior to the next expected billing unless mutually agreed to by both parties.

In the event of a cancel/rebill scenario:

- The Distributor initiates a Usage Cancel transaction to the Retailer.
- The Retailer cancels the original Invoice Bill Ready (IBR) to the Distributor.
- The Distributor sends the corrected Usage to the Retailer.
- The Retailer issues the corrected IBR to the Distributor (refer Cancel / Rebill at the end of the Invoices section for more details).

Application Advice

Once the Distributor receives the Invoice Bill Ready (IBR) transaction, it sends an Application Advice Accept or Reject back to the Retailer stating that the data was either accepted or rejected. This Application Advice Accept or Reject is sent no later than two business days after the receipt of the IBR transaction from the Retailer.

An Application Advice Accept in response to an IBR transaction indicates that the invoice amount (or, in the case of price protected or designated Business Partner's, the statutory amount) is presented on the Business Partner billing when the BP is billed for all charges for the respective Usage consumption, and the IBR amount is settled with the Retailer. If an IBR is rejected for any reason (Application Advice Reject), it is not to be included in the BP billing nor is it included in the settlement with the Retailer.

Only one Application Advice transaction can be sent in response to any request (i.e., Usage or IBR) received. Where the sending party has made an error in the type of Application Advice transmitted (e.g., an AA Accept was transmitted instead of an AA Reject), the offending party notifies the receiving party of the error immediately and both Market Participants must work out a fix as mutually agreed.

In Distributor Consolidated Bill Ready situations, if a Distributor receives an Invoice Bill Ready transaction from the Retailer after the Distributor has already sent the bill to the Business Partner; the Distributor rejects the transaction. The Retailer, receiving such a reject, combines the line items for the current late month together with the line items for the next month into the Invoice Bill Ready transaction for the next month.

Applicable Rules

Only Commodity Charges

The Retailer can only send commodity charges with one item per line. There is only one Business Partner to one Invoice transaction. Negative charges (i.e., credits) are allowed on an IBR.

One IBR per Usage

Where the Retailer chooses to send an IBR, only one valid IBR transaction can be sent in reference to one Usage transaction (Bill Requires field set to 'yes'). Multiple valid IBR transactions cannot be sent in reference to a single Usage transaction, nor can an IBR be sent without a corresponding Usage. Similarly, only one valid IBR Cancel transaction can be sent for any given Usage Cancel transaction.

An IBR Cancel is issued if the Usage transaction has been cancelled (i.e., with a Usage Cancel transaction) and an IBR has already been transmitted by the Retailer in response to the Usage transaction that is being cancelled. Additionally, under DCB, if the IBR has not yet been sent by the Retailer when the Usage Cancel is received, then neither the IBR referencing the original Usage, nor the IBR Cancel is required to be sent by the Retailer, but if received by the Distributor, they are processed. Further, in the case where a Usage transaction is received by the Retailer, the IBR transaction sent by the Retailer is rejected and the Retailer subsequently receives a Usage Cancel transaction prior to re-issuing a new IBR transaction, the Retailer would send no further transaction as the IBR transaction was rejected.

If the Distributor has received an IBR in response to a Usage transaction, then even if the Usage transaction is subsequently cancelled, the Distributor must bill the IBR amount unless the Distributor receives an IBR Cancel to cancel the original IBR.

In the event that the IBR has been sent and not rejected, and is revised or replaced, an IBR Cancel transaction is sent, followed by a revised IBR transaction for that same service period. It is not valid to send the replacement IBR transaction without first canceling the original IBR transaction being replaced.

WAHSP (Weighted Average Hourly Spot Price) Calculation

End use Business Partner bills are calculated in SAP using the daily WAHSP price and the 'reading to' date. All bills except Interval Accounts and cancel / rebills for LDC Business Partners, will be delayed 13 days from the reading to date. Final bills are also delayed 13 days. Final bills are calculated on a daily average price; for example, if bill is for 10 days use, the price is for that 10 day period. SAP stores daily power consumption and total amounts for both energy and street light.

During billing, the WAHSP rate is calculated in view of the account's date reading 'from' and date reading 'to'. Nevertheless, the WAHSP information pertaining to date reading 'to' is not included due to overlapping reading dates in SAP, so the reading 'from' date is used to start the calculation for the next billing period. The WAHSP rate for the service period pertaining to the End Use Business Partner is then used to calculate the commodity at spot component of the Retailer's Daily Invoice (communicated via ISD and IST settlement transactions) for non-interval accounts.

Daily Settlement with Retailers

Billing line items and Electronic Business Transaction (EBT) are generated in SAP. The EBT transactions are sent to the applicable Retailers. The Retailer sends an electronic payment to Inergi Treasury for EUC charges and commodity charges. Payment is posted into SAP. The daily settlement bills must be reviewed first thing in the morning on a daily basis and a refund issued to the Retailer when there is a credit balance. A credit balance is most likely to occur in the LDC Consolidated Billing option, but could occur for Retailer Consolidated Billing if there was a significant credit adjustment to the account. There is no way for the user to distinguish if a bill is LDC or RCB until it is viewed. Payments to Retailers are approved in SAP by Inergi's client and once the invoices are approved, the payment posting will run will be initiated by Inergi Business Analyst which creates a Payment/Clearing document that will contain invoices to be paid out to the Retailer. LDC Consolidated Billing (also referred to as DCB – Distributor Consolidated Billing) means that the Business Partner receives only one bill that is issued by Inergi's client. This bill includes the Retailer's commodity charge and all other applicable charges to Inergi's client. In this scenario, the daily settlement bill to the Retailer includes the difference (+ or -) between the Retailer's commodity (commodity x Retailer's kWh price) and commodity at spot price.

Retailer Consolidated Billing means that the Business Partner receives only one bill, issued by the Retailer and including all applicable charges from the Retailer and Inergi's client. In this scenario, Inergi's client issues a daily settlement bill to the Retailer that includes all charges for:

- EUC usage multiplied by the spot price;
- Distribution and transmission charges; and
- All EUC applicable service charges.

Commodity charges are the usage charges that a Business Partner is to be billed for, based on the consumption. In case of RCB Business Partners this charge is determined by the Retailer. Non-commodity charges refer to the other charges (Fixed and variable distribution charge, tax, Global Adjustment charge, Distribution volumetric charge, etc.). In case of Retail Consolidated Billing Business Partners, the usage information and the non-commodity charges mentioned above is provided to the Retailer to bill the Business Partner.

Monthly Settlement with Retailers (on service charges)

The Retail Settlements Code stipulates that the distribution company will issue a monthly bill to market participants. This is in addition to the Daily Retailer Settlements Bills, which are described in a separate work instruction. The purpose of this business process is to calculate the monthly bills for Retailers, based on the requirements specified in the Retail Settlements Code and Chapter 12 of the Rates Handbook in the section titled 'Other Regulated Charges'.

1. Retailer monthly billing is on a pre-defined billing cycle. On the bill date, SAP calculates all applicable monthly charges incurred during the period. This includes Service Transaction Requests (STRs), requested and accepted, as well as billing service charges. SAP calculates a monthly non-energy billing to be sent to the Retailer. Transactions are tracked in a services log table within SAP and invoices are issued by SAP.
2. Business Customer Centre receives printed notification from SAP that the Monthly Bill has been generated with "pending" status. Since the billing process continues whether the bill is viewed or not, it is important that these bills are worked daily. These notifications are generated in SAP.
3. The bill is generated, the ledger updated and is complete.
4. The bill is formatted by SAP, and validated, and delivered to the Retailer via EBT (SAP EBT).
5. Payment from the Retailer must be received and applied to the account by the settlement due date to avoid late payment charges. Retailers are responsible for ensuring that payments made by cheque are received by Inergi's client in time to allow for processing time.

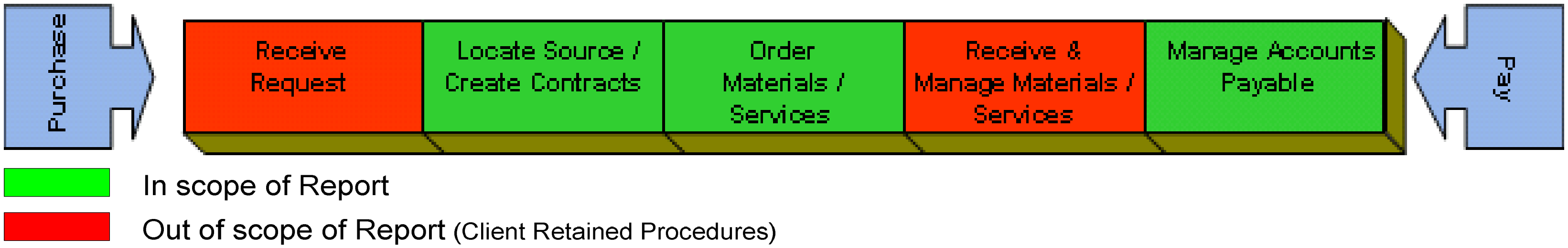
BCC reviews all Retailer Monthly Bills in SAP and takes applicable action as described below. The reviews are performed in SAP. When viewing these Bills, the appropriate Monthly Fixed Charges, Variable Charges, Standard Distributor Consolidated Billing Charge and Avoided Cost Credits are verified on each Retailer's Bill. The Department ID needs to be added to each charge code for every bill to determine that the accounting distribution is correct. There should not be a credit balance on a Monthly Bill. When a Bill is received, the Agent performs a validation check to determine that the Bill is accurate based on what was expected for that Retailer.

The following criteria are applied before releasing the Bill:

- Dollar Amount/ Business Partner Volume: Current Month vs. Prior Month;
- Percent of Use: Current Month vs. Prior Month;
- Dollar Amount / Business Partner Volume: Current Month vs. Like Month Prior Year; and
- Bill Group.

Tolerance level is 10% of the dollar value for monthly bills and 100% for daily bills (e.g., if the dollar amount is usually $2,000 and an invoice is received for $4,000, a further investigation is required).

Purchase to Pay



Inergi manages the procurement of material, equipment and various service and consulting contracts on behalf of its Client. The following applications support the effective delivery of these services: SAP (the main system for procurement, inventory, accounts payable management and depending on the nature of the item, requests from Inergi's client are fulfilled as follows:

- through established Outline Agreement (OA); or
- generation of a new Request for Quotation / Tender / Proposal (Spot Buy Purchase Order).

Receipt and management of the material and services procured on its behalf are the responsibility of Inergi's client. Payment of invoices is managed by Capgemini.

Receive Request

Requests for materials or services are prepared in ERP system (SAP) by Inergi's client and, occasionally, by the Requisition Desk of Inergi. For Inergi's client personnel who do not have access to SAP. Purchase Requisitions are received via email or initiated by phone to the Inergi Requisitioning staff.

A Purchase Requisition can be for three types of line items: Stock items 'S' in catalogue, Direct Ship items 'D' in catalogue, or Free Text. Each item in the catalogue has a unique Cat ID (Catalogue Identification Number) assigned to it in SAP. Inergi's client is responsible for the completeness, accuracy and authorization of procurement-related requests and for the appropriateness of SAP system access granted to its employees, including signatures for approval.

Emergency Purchase Requests

During an emergency, all purchases are completed under the direction of the Inergi's client emergency command post. Inergi's client's Emergency Preparedness Policy sets forth responsibilities and requirements for emergency preparedness planning for natural and man-made situations that:

- Pose a real or potential risk to the health and safety of employees, contractors or the general public;
- Threaten or potentially threaten Inergi's client's physical assets or the environment;
- Jeopardize or potentially jeopardize Inergi's client's ability to transmit or distribute electricity or provide telecommunication services or provide energy services; or
- Jeopardize or potentially jeopardize the conduct of Inergi's client's business processes in a normal, orderly manner.

Locate Source / Create Contracts

Request for Quotation, Tender or Proposal

In accordance with Inergi's client's policies, Inergi initiates a request for information quotation, tender or proposal based on the value of the purchase request. Competitive quotes, tenders or proposals are solicited where the estimated price is between greater than $25,000. For purchases exceeding $50,000, a Memorandum of Purchase Approval is also required, approved in accordance with Inergi's client's limits or Decision and Limits for Supplier – Finance Source to Pay. For purchases up to and including $1,000,000, Inergi is delegated to approve the purchase on Inergi's client's behalf.

Single Source Purchases

Exceptional circumstances may arise where it is not practical or possible to obtain competitive bids and the material or service must be purchased from a Single Source. Such circumstances exist where there is only one vendor with the required capability or legal rights to its sale, and where compatible equipment is required to avoid expensive modifications to existing equipment (only acceptable source), or where the vendor is the best qualified and only known company to have the required expertise. A Sole Source is a vendor that can be clearly demonstrated as the only existing source capable of furnishing the required material and/or service and is the only source that has rights to its sale.

In such cases, the Requisitioner completes an 'Approval to Negotiate / Single Source' Form and obtains the necessary approvals from Inergi's client's appropriate Contract authorities prior to forwarding the completed Form and the request to the Inergi Buyers.

Service Contracts

The process for purchasing services is similar to that for acquiring material. The main difference concerns the additional information that is solicited from the vendor regarding their health and safety policy, safety record and insurance coverage, including WSIB (Worker Safety Insurance Board) certificates and ratings. Information on the certification of equipment and acknowledgement of labor requirements for unionized companies may also be required. Inergi Buyers collect this information on behalf of Inergi's client. Inergi's client completes the necessary assessments and notifies the Inergi Buyer of their decision.

Order Materials / Services

Creating and Sending a Purchase Order to the Vendor

Within the SAP system, there are two types of Purchase Orders:

- Purchase Orders; and
- Outlining Agreements (OA).

Based on the purchase request, the Buyer will fulfill the necessary requirements to obtain tender / quote information and complete the assessment. The appropriate vendor is then selected based on the established selection criteria, or as directed by the Single Source Request received from Inergi's client. After the appropriate vendor has been selected, the Buyer will create a Purchase Order. Purchase Request details from SAP are used to manually prepare the Purchase Orders. The Buyer is able to modify the Purchase Order to more accurately reflect quantities or descriptions of items being ordered. The completed Purchase Orders are forwarded for appropriate authorization in accordance with Inergi's client's Decision and Limits for Supplier – Source to Pay.

For most Outline Agreements, a PO release is automatically created by the system and transmitted electronically to the vendor. For some vendors, the request is issued manually via post. The SAP system controls the assignment of PO numbers, and notifies the Requisitioner that a PO has been issued.

Outlining Agreements are set up for repetitive purchases with pre-established, contracted pricing for a predetermined period of time. These are created in the system with the involvement of Inergi's client's Strategic Sourcing Initiative. For OAs less than $50,000, Inergi's Buyers are delegated authority to approve on Inergi's client's behalf. POs are released in the system automatically, or by the Buyers manually, depending on the set up of each specific OA. Any Outlining Agreements or Purchase Orders greater than $50,000 are manually approved with a Memorandum of Purchase Approval (MPA) as per Inergi's client's Decision and Limits for Supplier – Source to Pay. These approvals must be completed before the Purchase Order can be issued in the SAP system ('open' status).

Access to create and approve the same Purchase Requisition is restricted by system access parameters. Purchase requisitions cannot be created and approved by the same individual. Access to approve Purchase Requisitions, OAs or Purchase Orders (POs) in the SAP system is restricted to appropriate personnel, and procurement related functions (purchasing, accounts payable, goods receipt) are adequately segregated. On a periodic basis SAP access to procurement and purchasing functions by Inergi staff is reviewed by Inergi management for appropriateness and segregation of duties conflicts. This review is based on data provided by Inergi's client.

Release of Purchase Order to Vendor

The process of releasing the approved Purchase Order to a vendor depends on the settings established in the Vendor Master File. A Purchase Order generated by SAP is released to a vendor either by electronic fax, email or manually by mail. Most Outlining Agreement releases are sent through EDI or autofax, while Purchase Orders are sent using either electronic fax or post.

Vendor Master Files

A vendor code must be enabled in the Vendor Master File before a Purchase Order can be generated. Vendor Master Files are maintained for purposes of facilitating both the procurement process and the payment process. A Vendor Setup Request Form is used when establishing new vendors on the system. Each request to add or update the Vendor Master File within SAP is submitted via a Vendor Setup Request Form and is submitted electronically by the Buyer requesting the change to the Centre of Excellence for processing. Before creating a new vendor, the Vendor Administration Clerk (within the Centre of Excellence Team) reviews the existing Vendor Master File to determine that the requested new vendor does not already exist in the system. If the vendor does not exist in the system, a new vendor code is set up. The SAP system does not allow an existing vendor code to be assigned to a new vendor. The Purchasing Manager reviews changes to significant fields in the Vendor Master Files periodically.

Access to maintain the Vendor Master File in the SAP system is restricted to appropriate personnel. Purchase order processing, invoice processing and payment processing functions are adequately segregated from the Vendor Master File maintenance function. On a periodic basis access by Inergi staff is reviewed by Inergi management for appropriateness and segregation of duties conflicts. This review is based on data provided by Inergi's client.

Receive and Manage Materials / Services

Inergi's client is responsible for receiving and managing the materials and services procured on its behalf (including inventory). For Stock items, the Warehouse receives receipts and issues the inventory as required. Direct Ship materials are received by the Requisitioner who is responsible for signing the packing slip and sending it to the Warehouse for receipting. Completed services are settled via the approval of invoices for services rendered.

Manage Accounts Payable

The activities included in managing Accounts Payable include invoice scanning, invoice entry, invoice resolution and payment generation.

Invoice Processing

Inergi's Accounts Payable (AP) function is responsible for entering payment documents including invoices, cheque requisitions, wire transfers, and EFT. Invoices are received by the AP Department through a centralized PO Box whether directly from vendors or from client staff. All invoices and backup documentation are scanned, indexed including time and date stamped, and electronically transmitted to BPOpen, (Accounts Payable document management system) for processing to SAP. The invoice entered in SAP by the Accounts Payable Processor using the displayed BPOpen image, and the scanned invoice and backup documentation is attached to the SAP invoice document. Invoices are prioritized for processing on criteria including, but not limited to, invoice type (e.g., utility), date, value and payment terms.

Invoices fall into the following categories:

- Non-PO invoices; and
- PO-based invoices (Limit and receipt-based).

Access to invoice entry and invoice approval in the SAP system is restricted to appropriate personnel. Purchase order processing, invoice processing and payment processing functions are adequately segregated. The system design within SAP requires that Inergi staff with access to enter invoices should not have the ability to approve invoices. In instances where Inergi staff are assigned this conflicting role, Inergi's access provisioning process forwards a request to Inergi's client for the user to be assigned to Position S 5000076 in the HRP1001 table, which is associated with AP Resolution Clerks for IAW Workflow to block them from completing the First Reviewer function for non-PO invoices. Inergi's Client's HR Reporting Centre of Excellence is responsible for maintaining the HRP1001 table and completing this assignment. On a periodic basis access by Inergi staff is reviewed by Inergi management for appropriateness and segregation of duties conflicts. This review is based on data provided by Inergi's client

Non-PO Invoices

Non-PO invoices can relate to purchases such as services or office supplies. Vendors send their invoices directly to the centralized Post Office box or may, at times, send Non-PO invoices directly to Inergi's client Purchaser who reviews the invoice to verify accuracy, resolves any discrepancies and sends to the centralized PO Box, Inergi's client is responsible for ensuring the appropriateness of the purchase and related authorization in accordance with the Decision and Limits for Supplier – Finance document. The Purchaser is required to reflect on the invoice the person the request should be forwarded to for approval. Approval Requests are generated based on the authorization requirements as established within SAP by Inergi's client. Inergi's client is responsible for notifying Inergi of any change required to the Authorization Listing. The SAP system generates a payment reference number for each invoice entered in the system. The AP processing clerk notes the reference number in the BPOpen indexing field for document number to complete and close out the items as a new task. . Following invoice approval, the payment status in SAP changes to ''Free for Payment' and payment based on the Vendor Master File is initiated. Payment terms are modifiable at the time of invoice entry, based on client approval, evidence of which is attached to the A/P document in SAP. For any invoice received directly by the Accounts Payable Department, the invoice is then routed through the workflow to the appropriate client contact for approval in accordance with authorizations established within SAP by Inergi's client. Payment terms are generally set to a default of net 30, except for utility bills which are net 1 day. Payment terms can be modified based on approved instruction from Inergi's client.

Donations and other non-invoice items are managed by Inergi as Non-PO transactions. For certain other Non-PO disbursements, such as damage claims, Inergi's client has engaged another service provider and Inergi has no responsibility or involvement with those items.

PO Invoices – Receipt Based – Goods/Services

The SAP system performs a three-way match to compare and align the PO details with Goods Receipt/Service Entry Sheet details in SAP. Price and quantity information on both the PO and Goods Receipt is matched with the invoice. If the quantity received (i.e., invoice quantity greater than PO quantity), invoice amount, or unit price is outside the defined tolerance limits configured in SAP ($100 or 2% of the line item whichever is lower), the invoice is blocked for payment. The invoice cannot be released for payment until either the PO is modified by authorized personnel, approved and the invoice re-submitted, or the invoice is cancelled and a new invoice is received from the supplier, or the goods are received. If the Goods Receipt does not match, then the invoice is held in the system as 'invoice verification' and an alert is generated to Inergi's client's further investigation. The invoice cannot be released for payment until the goods are receipted by Inergi's client. Once a three-way match has been made, the invoice/payment status changes to 'Free for Payment'. Invoice payment is initiated in accordance with payment terms reflected in the system (i.e., as per the PO). Payment terms are modifiable at the time of invoice entry, based on appropriately documented and approved direction from Inergi's client which attached to the A/P document in SAP. Also refer to 'credit invoice' under 'Authorize to Complete (Inventory)'.

A weekly report is produced from SAP AGED TRIAL BALANCE {ATB} which lists all invoices. The Resolution Team is responsible for following up on outstanding invoices. This Team, which is part of Accounts Payable, is responsible for monitoring the ATB for invoices "greater than 30 days for invoice date, and in the system for greater than 30 days from entry date. Report is used to determine that items are being cleared using the 'IssueTrak' system which creates issues tickets for each invoice for follow-up. Accounts Payable does not generally correct mismatch errors. Quantity errors are typically corrected by Inergi's client's warehouse personnel. Price errors are typically corrected by Procurement personnel (i.e., Buyers as notified by workflow notice). Accounts Payable will make adjustments to invoice information directly into SAP if there has been a keying error upon entering the invoice into SAP.

Corporate Accounting posts Accounts Payable (AP) accrual journal entries on a monthly basis to account for invoices that are pending processing in SAP.

EDI Invoices

Electronic invoices are received directly from EDI enabled vendors in electronic form by TSDC-IT which uploads the information into SAP daily. Payment is initiated in accordance with payment terms reflected in the system after the invoice is "Free for Payment". If an error is generated in the upload process, Accounts Payable gets involved to investigate and resolve.

Limit POs

Limit purchase orders are generally related to service or consulting types of activities. Invoices related to these purchase orders are entered into the SAP system which performs a two-way match, matching the PO value with the accumulated invoice value. A mismatch alert will be generated if the mismatch is outside of defined tolerance limits configured in SAP ($100 or 2% of the line item whichever is lower), which is sent by the system to the respective Project Manager (i.e., client) and the Inergi Buyer. Invoices are held within the SAP system as status "invoice verification", and cannot be released for payment until either the PO is modified and resubmitted for approval, or the invoice is cancelled and a new invoice is submitted and approved. Once the discrepancy is resolved, the invoice status in the system changes to 'workflow approval'.

After a successful two-way match, invoices are routed for approval via the workflow in accordance with the authority levels established in SAP. Routing for approval is done based on the settings established within SAP. Once the invoice has been approved in SAP, the invoice status changes to "Free to Payment". Payment is initiated as per the payment terms in the purchase order Vendor Master File. Payment terms are modifiable at the time of invoice entry based on appropriately documented and approved instructions from Inergi's client. Such documentation is attached to A/P document in SAP.

Vendor Holdbacks

Purchase Orders may be setup to include a Vendor Holdback. Invoices related to these purchase orders are entered into the SAP system, and the Holdback is added as a separate line item. Holdback line items are held within the SAP system until the conditions to release it are met. At that point, the invoice status in the system changes to 'workflow approval', and the holdback line items are routed for approval via the workflow in accordance with PO configuration and the authority levels established in SAP. Once the holdback line item has been approved in SAP, the status changes to "Free to Payment" and payment is initiated as per the payment terms in the purchase order.

Utility Bills

Utility bills are classified as 'priority payment' status with net payment terms of 1 day. They are processed as Non-PO invoices, and forwarded to the appropriate individual for authorization via the workflow in accordance with the authorization requirements established in SAP. A Spreadsheet containing details of accounting distribution and authorization contact information is maintained by the Accounts Payable. The Spreadsheet reflects direction received from Inergi's client and can only be modified by the Accounts Payable based on direction and approval from Inergi's client.

Service Contracts

Service contracts can be handled through PO or Non-PO invoices. Small service contracts, for example, temporary employees for one week, are usually settled as Non-PO invoices. Larger service contracts require a higher level of approval in accordance with authorizations set up in SAP, and are mainly settled as PO invoices.

Duplicate Payments

The SAP system generates a warning if duplicate invoice and cheque requisition entry by validating the combination for invoice date, invoice number and vendor number. On a weekly basis, a Duplicate Invoice Payment report is generated by the SAP system during the payment process for review by the Accounting Services Clerk. Any unusual items are investigated and resolved by the Accounting Services Clerk.

Payment Processing

Vendor setup within the SAP system includes direction as to the means by which vendors prefer to be paid (e.g., electronically or by cheque). If account and routing numbers are provided, and the vendor has requested electronic payment, then the payment is processed electronically, subject to proper authorization. There are three methods used to make payments: Electronic payments (EFT), paper cheques and wire transfers. A batch job (i.e., scheduled and automated) is run nightly, generating a report of payments to be made based on invoice due dates. Cheque Registers, EFT and Wire Transfer Reports are generated.

Access to the Payment Function in the SAP system is restricted to appropriate personnel. On a periodic basis access by Inergi staff is reviewed by Inergi management for appropriateness and segregation of duties conflicts. This review is based on data provided by Inergi's client.

Electronic Payments

Once the vendor is set up for electronic payment, all payments are handled electronically. Inergi sends the EFT Payment File to the bank. The EFT Payment File is automatically generated on a daily basis by the SAP internal job scheduler. It includes all the payments to be made for the day which are paid by Inergi's client's Treasury Department. Once payment is made, the SAP voucher file information is updated with the EFT reference number and settlement date, which indicates that the invoice has been paid. The EFT and Cheque Control Reports over $100,000 (i.e., a threshold which has been established by contract) are reviewed and signed by the Accounts Payable Supervisor. On a daily basis, an EFT File Process Report and an Input Edit & Trace Report are provided by the bank for review and comparison by the Payment Quality Clerk to the decompressed EFT Report. The results of this review are approved by the Accounts Payable Supervisor. Any errors not previously identified by Accounts Payable will be identified in the reconciliations described in the 'Record to Report' section.

Paper Cheques

The process of printing paper cheques is initiated by Inergi daily. On a daily basis, SAP creates a Batch File of all paper cheques to be printed for the day. Cheque information is automatically populated in the file based on the information input into SAP during invoice entry. Authorized Accounts Payable personnel access the cheque stock, and document the starting cheque number and ending cheque numbers. Paper cheques are kept under lock and key, and are accessible only by a limited number of approved Accounts Payable personnel. The staff loads the proper number of cheques into the printer while performing a completeness validation to verify the start and end cheque numbers match the print file. Accounts Payable staff initiates the cheque printing. Accounts Payable staff notifies the Payment Quality Clerk when the cheque run is complete and the Payment Quality Clerk performs a verification of cheque numbers.

If there is a cheque printing malfunction (e.g., paper jam), the Accounts Payable Clerk investigates and flags the issue with comment on the Cheque Printing Log. Any ruined/duplicated cheques are marked as void, with comments documenting the error in the Cheque Printing Log, and shredded immediately. A new set of cheques is run to replace any voided cheques, using the same cheque numbers as on the voided cheques. Summary information from the SAP Cheque Registers (i.e., first and last cheque number, monetary totals) is reconciled with the Status Page Report on a daily basis. The Cheque Printing Log is signed by both the Accounts Payable clerk and the Payment & Quality Control Clerks to record spoiled cheques during printing. The cheque stationery is kept locked in a cabinet in a secured room. The keys to the cabinet and the room are kept by the Payment & Quality Control Clerk and the Accounts Payable Supervisor.

Positive pay is utilized for all cheque payments. The Positive Pay File is automatically generated as part of a batch process, based on information contained in SAP. Inergi forwards the Positive Pay File to the bank for use in monitoring for inappropriate payments or banking errors. Inergi is notified by the bank of any unusual activity for information and/or resolution purposes. Inergi involves Inergi's client's Treasury Department as appropriate in resolving any issues.

The Accounts Payable group generates a report which displays all exceptions (including Paid Exceptions, Paid No Issue and Payee Match Exceptions) from the banks website each day. The Payment and Quality Control Clerk investigates and follows up on these exceptions on a daily basis. The Senior Financial Supervisor, Accounts Payable, performs an independent review of the exceptions reports and associated actions completed by the Payment and Quality Control Clerk.

Immediate Cheque Processing

Immediate Cheques are rarely used, but are available when needed for rush or emergency situations. The invoice is entered into SAP and a SAP workflow is initiated to the client for approval. Accounts Payable sets up the payment using the SAP Cheque Payment module. Accounts Payable distributes the cheque in accordance with the Requestor's instructions. Statistics on Immediate Cheques issued are reported to Inergi's client as part of the monthly Service Level Reports.

Wire Transfers

Wire Transfers represent payments that are made to vendors by bank transfer and are booked on a daily basis. Wire Transfers are approved for payment and executed by Inergi's client's Treasury Department. Wire Transfers are recorded in SAP as Wire Transfers. The SAP system has automated controls to determine that no duplication of payment is made to vendors. Inergi's client's Treasury Department provides Inergi with a report listing wire transfers executed. All wires received from Inergi's client's Treasury Department are reconciled and verified by the Payment & Quality Control Clerk.

A complete listing of all Wire Transfers is produced for review and signature by the Payment & Quality Control Clerk and the Accounts Payable Supervisor.

Corporate Charge Card

Every month, Financial Supervisor, Accounts Payable receives the bank invoice and reconciles this information to the MasterCard data uploaded in the SAP system by the TSDC-IT team. Differences are followed-up and resolved by the Financial Supervisor, Accounts Payable. Inergi's client is responsible for ensuring adequate controls are in place to determine validity and appropriateness of client employee purchases made using the Corporate Charge Card, as well as for insuring that client employees retain sufficient and appropriate evidence of business related transactions.

Accruals

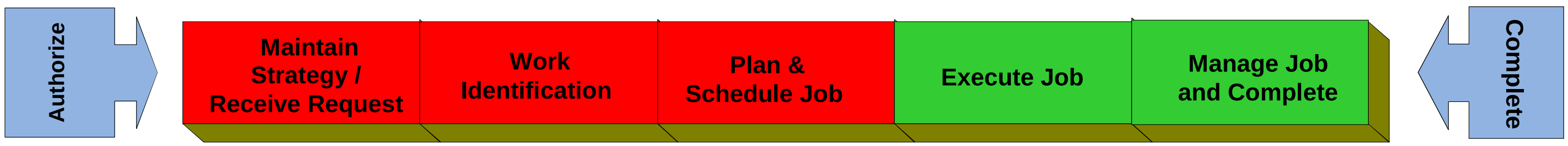
Inergi's client is responsible for determining and requesting accruals for Non-PO purchases.

Reconciliations

Each month, bank reconciliations are prepared by a member of the Accounts Analysis Group for review and approval by appropriate independent Inergi personnel as indicated in the Account Control listing provided by Inergi's client.

On a monthly basis the Accounts Payable Sub-ledger and General Ledger in SAP are reconciled by a member of the Accounts Analysis Group. In addition, a GR/IR Liability Account Reconciliation is also prepared by a member of the Accounts Analysis Group. The reconciliations are reviewed and approved by appropriate independent Inergi personnel as indicated in the Account Control listing provided by Inergi's client.

Authorize to Complete



In scope of Report

Out of scope of Report (Client Retained Procedures)

Execute Job / Manage Job and Complete

Fixed Assets

Responsibilities for processing transactions related to projects and fixed assets are shared by Inergi, Asset Management (including Fixed Assets and Project Costing) and Inergi's client.

Inergi's client performs the following:

- Project initialization, approval and setup of investment number for project in Investment Management / Project System;
- Expenditure approval and creation of Work Orders;
- Assigning project codes to distribute applicable costs to jobs (Materials and Supplies; Transportation; Labor Costs; Direct Purchases; Overheads);
- Review of project costs;
- Project cancellation; and
- Initiates project closures and transfer of costs from AUC to Capitalization and Business Complete.

Inergi's Asset Management Group performs the following:

- Setup of project in the Project System based on client's request for Manual Project (non-Investment Management - recoverable);
- Settlement of capital projects from WBS to AUC to Capitalization through scheduled batch jobs and changing project status to in-service (on request);
- AUC / Fixed Assets includes Accumulated Depreciation General Ledger account reconciliation;
- Fixed assets accounting valuation (NBV provided on request);

- Major and Minor fixed assets retirements (on request);
- Asset impairment posting (upon request);
- Fixed asset cost adjustments (upon request);
- Fixed asset transfers (upon request); and
- Fixed asset sales (upon request).

Asset Master Data

Super Asset numbers are created by TSDC-IT Team based on the request received from appropriate personnel at Inergi's client through Inergi FA Team in SAP. The Super Asset ID generally corresponds to a location

Asset master records created will apply for assets being created for all business segments in a company code. Applicable structures will be: BU/segment – 100 for Co. code 1100: 210, 215, 220, 230, 300, 570, 620 for Co. Code 1200: 650 for Co. code 1300: 510 for Co. Code 1400: 610 for CO code 1500.

In SAP, the settlement of capital projects goes from SAP PS/PM to SAP – AA under AUC Asset Class. Within the asset register the set up of the AUC asset class/classes and their attributes will be required to drive the accounting postings to AUC (CIP) and the various reporting requirements pertaining to AUC (CIP). The set-up of an AUC asset class is similar to a Major or Minor asset class but the values and configuration can be directed to meet different objectives. The number of AUC asset classes and their attributes to develop settlement rules for unitization and to meet various reporting requirements such as tax reporting, CIP continuity schedules, etc. have been determined.

Requests for the creation or update of fixed assets master data are initiated by relevant Fixed Asset Register Requestors at Inergi's client. Requests are formally documented via the prescribed Request Form. Data requirements necessitated by the requests are analyzed / reviewed by the Fixed Assets Register Analyzer or Processor before they are entered into the system. List of mandatory and eligible attributes (for asset class) are available as reference for the review. The master data created or update report is generated and reviewed by the Fixed Asset Register Processor. The master data additions / changes are sent to Asset Manager for confirmation.

An Asset Number (12 digit asset record and Sub Number) will be assigned to every asset, according to the Asset Class. All asset transactions are associated with an asset number. Asset Numbers are assigned internally by SAP according to an asset class, e.g., land, plant, building, motor vehicles, office furniture & equipment, etc. Asset Sub Numbers are used for differentiating parts of components of an asset. They may also be used to differentiate asset original value and additional capitalization. Asset numbers are automatically generated by SAP. Minor fixed assets and intangible assets are maintained in the Asset Accounting system.

Asset Class

- Asset masters are classified according to asset classes.
- Both asset main numbers and sub numbers will be in running sequence (i.e. not external numbering).

Capital Project Setup

Two types of capital projects are set up in project system

a) Creation of a project from Investment Management. Projects are automatically created in PS. Inergi's client is responsible for this activity.

b) Creation of a project in Project System (PS). The Inergi Asset Management Group creates projects in PS via Manual Request Form from Field Services (Internal/External Revenue and Telecom) at Inergi's client.

Capital Projects are initiated by Inergi's client once they have been approved through Inergi's client's capital planning and approval process. In order to initiate a Capital Project, Inergi's client's Project Team must create an Investment Number in the Investment Management/PS system. Subsequently, Inergi's client's Project Team advises Inergi's Asset Management, via email to open a project in PS. Typically accompanying this request is a Manual Request Form prepared by Inergi's client contains details of Business Unit, Project Type, Department ID, Project Description, etc., associated with the project. Inergi's client is responsible for proper authorization of the request, as well as the completeness and accuracy of the information sent to Inergi to set up the project in PS.

The Cost Accounting Clerk, Asset Management populates the required information on the Manual Project Setup Document using the excel template (manual project request from) in Project System and initiates the set up of the Project number as requested. The project numbers are assigned by the system based on the number range predetermined in the system for non-Investment Management manual projects. Details from PS, including Project number, are sent to Inergi's client's requestor (Project Manager / Initiator) for future reference when establishing work orders or project tracking. Upon completion of project setup work orders can be created against the new Project number in SAP. Work orders are created by Inergi's Client.

Access to project costing functions, setting up of a new project and update to project status in SAP is restricted to appropriate Inergi personnel.

Minor Fixed Asset (MFA) - Expenditures Less Than $2,000

Manual postings:

The cost of assets less than $2,000 are transferred to the Minor Fixed Asset Suspense account based on the account assignment defined on the PO and invoice as the capitalization criteria for these assets are not set in the SAP system. The costs transferred to Suspense account through AP clearing are reconciled on monthly basis by Inergi's Accounts Analysis Group and the same is notified to Inergi's client for further instructions. Inergi's client is responsible to determine that cost classification (i.e., capital vs. non-capital) is appropriately established as part of the procurement process, and for establishing appropriate monitoring controls to determine the reasonability of cost classification.

Automated Postings:

Transactions against Minor Fixed Asset purchase orders (POs) in SAP will automatically be posted to the appropriate MFA GL account, based on the asset class assigned to the asset via the material group specified in the Purchase Requisition. For Limit based POs, this will be triggered by the Invoice Receipt; otherwise, the posting is triggered by the Goods Receipt.

The asset class is populated on the Purchase Requisition based on the material group specified by the requestor. The asset class can be subsequently updated on the Purchase Requisition if a different asset class is specified. Once the Purchase Requisition is approved, the asset class can no longer be modified.

Project Cost Accumulation

Material procured against capital work orders is recorded as described in the 'Purchase to Pay' process section. Labor is charged and allocated by Inergi's client's Project Teams through the SAP application as described in the 'Hire to Pay' process section.

For Minor fixed assets costs are transferred to the suspense account and analyzed on a monthly basis. Once all outstanding items have been analyzed and sent to Inergi's client, the suspense accounts are cleared by posting the MFA transactions to the appropriate Capital GL accounts based on instructions from Inergi's client.

Throughout the life of a project, Material and Labour costs are transferred within SAP according to preset settlement rules. The costs are allocated using the standard SAP Settlement process. The costs from activities / orders settle externally from CO to the Asset Under Construction (AA-AUC) in the Fixed Asset Module for capital projects or GL Accounts for External and Internal Recoverable projects (or cost centre for all other projects). The costs of the project accumulated under cost elements are transferred to Asset under Construction through weekly/ monthly scheduled batch job based on the settlement rules preset in SAP system.

Placing Assets In-Service

Capitalization from AUC to SAP-AA:

Update of in-service status for specific project types are automated within SAP-PS based on system driven parameters. For remaining project types the status has to be updated manually in SAP via status update 'REIS'. Automatic cost settlement and capitalization in accordance with pre-defined rules configured in the system (Investment Management/PS/PM/AA). The SAP system automatically creates records for assets under construction on settlement run.

When work has been completed and the asset is ready for service, the Service Provider will complete the Report of Equipment In-Service (REIS). A user will update the System Status on the level 1 WBS to 'TECO' 'Technically Complete' and the User Status on the Level 1 WBS to 'In-Service'. The 'In-Service' status is the trigger point for the special extension AUC capitalization program to insert one or many settlement lines with the Settlement Type = 'FUL' on the level 1 WBS Settlement Panel. Then the CO settlement job (T-Code CJ88) will transfer the AUC amounts to the fixed asset(s) that are shown on the one or many settlement lines.

Some characteristics of a project in ‘Technically Complete’ status include:

- No more PO’s or PR can be created;
- No additional orders or networks can be assigned;
- Outstanding invoices can still be posted to project; and
- Labor can still be posted to project.

‘Business Close’ status indicates that work is complete. Some characteristics of a project in ‘Business Close’ status include:

- Stops all costs from being posted to the project
- As part of standard SAP functionality, the system will not allow users to change the System status to ‘Business Close’ if:
    - there are open purchase requisitions;
    - Open purchase orders;
    - Unsettled costs / hours; and
    - Final confirmation of activities not completed.

Level 1 WBS System Status will be updated 9 months after project status is changed to TECO. This update will be done manually by Inergi’s Asset Management group.

In order to create a fixed asset (i.e., transfer costs from AUC to In-Service Assets), Inergi’s client submits a REIS Form (Report of Equipment in Service) through SAP workflow for Capital Projects. The REIS Form contains details like Asset ID, Project number, Service Date, Amount (Approximate Value) spent on the Project. This Form also has details like Asset Profile ID which determines the appropriate depreciation rate. The Form is received by the Cost Accounting Clerk, Asset Management. Upon receipt, Cost Accounting Clerk, Asset Management changes the Project status from ‘open’ to ‘in- service’. Inergi’s client is responsible to determine that REIS Forms and accompanying information submitted to Inergi are accurate and appropriately authorized.

Every month-end, the capitalization batch process is run in SAP and the costs allocated are calculated and transferred to Project. The final capital cost reflects all actual costs allocated to the Project in SAP, including any interest and overhead allocations, as well as any manual adjusting entries requested by Inergi’s client (e.g., capital contributions). The SAP Project Systems module automatically calculates interest and overhead costs used in these allocations.

At month-end, the final capitalization process occurs and the appropriate fixed asset accounts are debited (based on asset number, asset profile established in SAP), with an accompanying credit to the AUC (AUC becomes zero). The asset class is mapped to a depreciation key in SAP which will determine the depreciation to be charged on the asset.

Inergi’s client Corporate Accounting or Project Manager (Asset Management) will submit a request for an Asset Adjustment via an email with appropriate documentation, including a description of the assets to be adjusted, the amount of adjustment, effective date, and appropriate approval documentation. The Cost

Accounting Clerk, Asset Management selects a menu path in SAP and input details to individual assets and process and post the adjustment. When the adjustment applies to a group of assets, a prorating methodology would be used to assign costs to individual assets. The Cost Accounting Clerk, Asset Management reviews FI documents and executes transactions in SAP with the effective date as the posting date.

Reconciliations

Inergi's Accounts Analysis Group performs monthly reconciliations of AUC (i.e., account 174051) sub-ledger balance with SAP Asset Accounting. These reconciliations are prepared by a member of the Accounts Analysis Group and reviewed by appropriate independent Inergi personnel as indicated in the Account Control listing provided by Inergi's client and provided to Inergi's client (and BUs) on a monthly basis. The reconciler runs a report of all open projects after settlement to ensure that the balance in all projects becomes zero.

On a monthly basis, a member of the Accounts Analysis Group reconcile all Suspense Accounts by identifying any activity in the General Ledger account balances and make adjustments where required. The reconciliations are reviewed and approved by appropriate independent Inergi personnel as indicated in the Account Control listing provided by Inergi's client.

On a monthly basis, the Fixed Assets account is reconciled to the SAP GL balances for all the Capital Accounts and Accumulated Depreciation Accounts (Account # 111555 & 142100). The GL balances are updated by the Inergi Corporate Accounting Team. The reconciliation is prepared by a member of the Accounts Analysis Group and reviewed and approved by appropriate independent Inergi personnel as indicated in the Account Control listing provided by Inergi's client.

During the Major Fixed Assets Capitalization process through settlement run from WBS to AUC and to Asset Capitalization, two Error Reports are generated:

- Stage 1 Settlement errors report; and
- Stage 2-3 Settlement error report.

The Senior Financial Analyst, Asset Management reviews the reports and investigates and sends these reports to Inergi's client for corrections of errors as necessary.

Fixed Asset Retirements

For purposes of recording transactions related to 'minor' and 'major' fixed assets, the following definitions apply:

- Major Fixed Assets – Major Fixed Asset additions represent new capital expenditures. These fixed assets are typically created through the monthly capitalization process whereby Capital Projects are placed in service through automatic cost settlement and capitalization in accordance with pre-defined rules configured in the system (Investment Management/PS/PM/AA).
- Minor Fixed Assets – Minor Fixed Asset additions fall within certain categories established by Inergi's client for classification as Minor Fixed Assets. These categories include vehicles, office furniture, computer equipment, tools and aircraft. Additions to the Minor Fixed Assets category normally result from the procurement of manufactured items which are ready to use.

These definitions affect accounting for fixed assets, including depreciation charges thereon, in accordance with Inergi's client's established policies and procedures.

Major Fixed Asset Retirements

Inergi's Fixed Assets Group posts adjustments to Major Fixed Assets based on completed request received from Inergi's client. Before any Major Fixed Asset is retired, the net book value of the specific asset(s) is calculated by the Inergi Asset Management Group. The asset valuation is initiated by Inergi's client either through email or on a completed Surplus Declaration Form. The valuation is completed on the valuation screen and the results are forwarded to the requester by Inergi's Asset Management group via email or on the Surplus Declaration Form.

The Inergi Investment Recovery Group processes the fixed assets sales upon receipt of an approved Surplus Declaration Form from Inergi's client. The Cost Accounting Clerk, Asset Management enters the sale into the Fixed Asset Module based on sales report.

Sales are processed through Investment Recovery Group on receipt of Surplus Declaration Forms prepared and approved by Inergi's client. Sales are processed by Inergi's Investment Recovery Sales Officer / Supervisor.

The Fixed Asset data is maintained in SAP.

Minor Fixed Asset Retirements

Retirements related to Transportation and Work Equipment (TWE) are posted by Inergi based on an Auction Report for revenue-based retirements/sales or surplus declaration form for non-revenue based retirements/sales received from Inergi's client's Fleet Asset Management Services Group, approved by Inergi's client. The reports provide details related to the asset sold including the unit number, sales value, etc. The Cost Accounting Clerk, Asset Management posts the relevant information into the Fixed Asset module. A report of TWE sales is generated from the Fixed Asset module and provided to Inergi's client's Fleet Asset Management Services Manager with a copy to Inergi's Investment Recovery Manager.

The Cost Accounting Clerk, Asset Management posts other Minor Fixed Asset retirements based on details provided by Inergi's client. Inergi's client is responsible for the accuracy, validity and completeness of the retirement information provided to Inergi.

The Fixed Asset data is maintained in SAP.

Access Controls

Access to maintain the Fixed Assets Master file within the Fixed Asset module, and access to post asset retirements and sales is restricted to the appropriate Inergi personnel.

The Fixed Asset data is maintained in SAP.

Asset Impairment Posting

Inergi's client is responsible for identifying any fixed asset impairments and notifying Inergi of any required adjustments. Notification is received from Inergi's client in either email or hard copy form. Authorized personnel within Inergi Asset Management or General Accounting post the required journal entry in SAP FI to reflect the change in the asset value.

Depreciation Posting

Depreciation is calculated on a monthly basis as part of the month-end process in accordance with depreciation rates established by Inergi's client for each asset class. Depreciation on new assets commences from the date that the asset is reflected as 'in-service' in the Fixed Assets Sub-ledger.

Each month Inergi's Financial Analyst, Asset Management, performs a test for reasonability of depreciation on Major Fixed Assets by comparing the current month's charges to the prior month's charge.

Major Fixed Assets Sales

The Investment Recovery Group processes the fixed assets sales upon receipt of a completed Surplus Declaration Form received from Inergi's client via email or hardcopy. Inergi's client is responsible to determine the completeness and accuracy of the Form, as well as appropriate authorization.

Sales of Major Fixed Assets are processed in the SAP FI module, by the Cost Accounting Clerk, Assets Management based on email or hard copy notification from Inergi's client. The notification provides details related to the asset sold including the unit number, sales value, etc.

Project Closure

Every month, the Cost Accounting Clerk, Asset Management generates the Dormant Projects Report which lists projects with 'open' status and no costs incurred for more than 150 days. The Cost Accounting Clerk, Asset Management closes any Dormant Projects of less than one million dollars based on delegated approval from Inergi's client. For Projects exceeding one million dollars, an email approval is required from Inergi's client (i.e., Project Team Lead) approving the closure before the Cost Accounting Clerk, Asset Management processes the Project closure.

Every month, the Inergi Cost Accounting Clerk, Asset Management generates the After Closure Report (i.e., Projects that have received charges after being closed). The Cost Accounting Clerk, Asset Management, redistributes any post-closure costs of less than twenty thousand dollars to the service provider's OM&A account. Before any adjustments can be made for amounts in excess of twenty thousand dollars, a written direction must be provided by Inergi's client. This direction is communicated by Inergi's client via email or hardcopy.

Every month, the Inergi Cost Accounting Clerk generates the report of Deferred/Cancelled Projects. The Report is used to assist Inergi's clients' Project Managers to effectively monitor their Projects and Fixed Assets per internal, external or regulatory requirements.

Project Cancellation

Projects are cancelled if there is a decision to cancel the Project or merge it with an existing Project. All Cancellation Requests are initiated by Inergi's client and communicated to Inergi Fixed Assets by email or hard copy. When a Cancellation Request is received from Inergi's client, the Senior Financial Analyst, Asset Management runs a query which identifies whether there are any charges relating to the Project(s) to be cancelled. Any remaining charges to be cleared are reflected in a journal entry prepared by the Cost Accounting Clerk, Asset Management and submitted for client approval (i.e., to the REIS Investment Plan mailbox). Client approval of the adjustment is required before the Cost Accounting Clerk, Asset Management will post the journal into SAP.

Re-Opening Projects

Re-opening of previously closed projects is performed when an additional posting on the project is required, based on instructions received from Inergi's client via email or hardcopy. Based on this instruction, Inergi Asset Management re-opens the project. Inergi's client is responsible for projects with costs >$20,000, and for the accuracy and completeness of project close requests, including the appropriate authorization of such requests. This can be tied back to the After Close Report.

Allowance for Funds Used During Construction (AFUDC) Calculation

Allowance for Funds Used During Construction refers to the rate of interest capitalized by Inergi's client in accordance to decisions made by the Regulator. On a quarterly basis, Inergi General Accounting staff updates the interest and overhead rates to be charged based on an email sent by Inergi's client.

On a monthly basis, the Manager, General Accounting, reviews the interest and overheads capitalized to the Projects for reasonability. Inergi's client is responsible for notifying Inergi of any necessary changes to interest or overhead rates, and for establishing effective monitoring controls to assess the ongoing reasonability of interest and overhead charges.

Access to run the capitalization process within SAP, and to change interest and overhead rates applied to Capital Assets, is restricted to authorized and appropriate Inergi personnel.

Asset Certification Process

Every year, a sample of fixed assets is selected for certification. Collaboratively, Inergi's client and Inergi select a sample for testing purposes to approximate 25% value coverage. Sample details are prepared by Inergi Financial Services to reflect the results of decisions made and the details are forwarded to Inergi's client's Corporate Finance Team. Inergi's client's Field Staff perform the certification process and forward results back to the Financial Analyst, Asset Management. Based on the results of the inventory certification process, asset retirements may be identified for posting using the process for documentation and approval requirements as related to retirements of fixed assets. Any adjustments required are documented by Inergi's client and this serves as the basis for any entries posted by Inergi's Financial Services.

Capital Contributions

Contributed Capital represents money received from a Customer for plant assets in which they have a partial or total ownership. The funds are entered in the Contributed Capital book of the Fixed Asset module. If and when a refund of contributed capital takes place, the Contributed Capital book is credited for the prorated value of the refund and the Accounting book is then debited for the same values to reflect transfer of ownership back to Inergi's client.

The Fixed Asset module is in SAP.

Vendor Holdbacks

When Vendor Holdbacks are ready to be paid to the vendors, and if they relate to costs to be capitalized, they will be processed through the same Project that the previously related costs flowed through. If the Project is closed, these amounts will show up on the After Close Report.

Catalogue Administration (Material Master Data)

Materials required by Inergi's client must be set up in the Material Master File in SAP before any items can be ordered. The Material Master File is administered by Inergi and Catalogue IDs (Cat IDs) are created in SAP at the request of Inergi's client. Inergi's client provides all of the information necessary to create the Cat ID. Cat IDs can be 'S' for items stocked in Inergi's client's Warehouse or 'D' for items shipped directly to a site and charged to Inergi's client's work order or account.

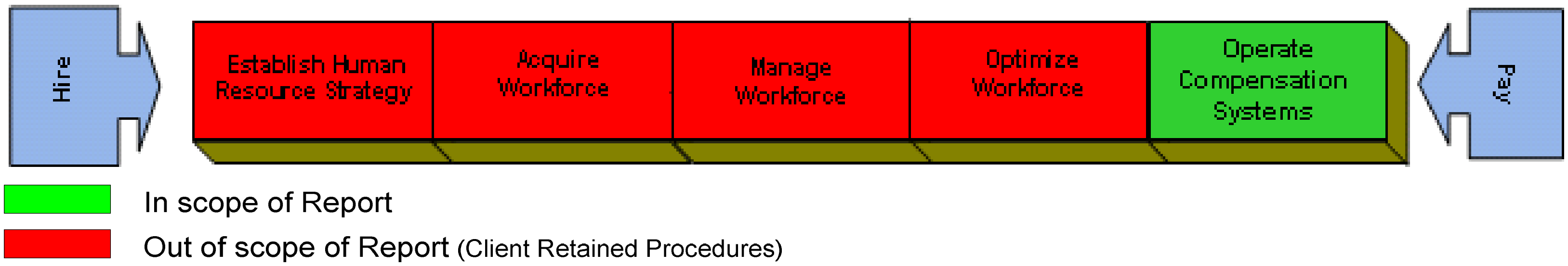
Inergi's client initiates changes to the Material Master File and is responsible to determine that additions and changes are appropriate and approved.

Access to maintain the Material Master File in the SAP system is restricted to appropriate personnel. On a periodic basis access by Inergi staff is reviewed by Inergi management for appropriateness and segregation of duties conflicts. This review is based on data provided by Inergi's client

On a monthly basis, Inergi's Inventory Specialists generate an Average Unit Cost report from SAP. Excessive cost fluctuations are flagged for review and follow-up. Inergi's client's Corporate Finance Groups are notified of any necessary adjustments to the SAP Catalogue Module and are required to clear any resulting suspense account entries to the appropriate end accounts.

On a monthly basis, the Accounts Analysis Group reconciles the inventory value in the SAP Sub-ledger with the inventory balance in the SAP General Ledger and evidence of this is provided to Inergi's client. The reconciliation is reviewed and approved by appropriate independent Inergi personnel as indicated in the Account Control Listing from Inergi's client and provided to Inergi's client.

Hire to Pay



Operate Compensation Systems

The Payroll system is SAP.

Inergi performs HR/Payroll data management for client employees and payroll processing functions for Inergi's Client's employees and pensioners in accordance with the outsourcing agreement. The key system relied upon for the effective delivery of these services to Inergi's Client is the SAP Payroll system.

The SAP system is the main source for client employee time exception data, and the SAP Cheque Payment module is used by Accounts Payable for preparation of paper cheques where required. Key controls related to the SAP application management is audited as part of the TSDC-IT audit.

Master Data File

The HR/Pay Master Data File within the Payroll system contains key information on client employees and pensioners. The Employee Data Base includes both unions representing Basic and Casual employees, as well as non-represented Management Compensated (MCP) employees. The HR/Pay Master Data File is a critical source of information for processing employee and pensioner payrolls and benefits. Inergi's Client is responsible to provide accurate and complete documentation to Inergi for updating the HR/Pay Employee Data Base.

Pensioner Data Base

Inergi's Client is responsible for maintaining the Pensioner Data Base with the exception of setting-up the CanTax Panel in SAP. Changes to the Data Base can be done by file upload from the Pension Administrator, Mercer, or by the Pension Administration staff of Inergi's Client. The upload is handled by Inergi and the result is routed back to Inergi's Client for validation.

Employee Data Base

Only authorized employee data changes are entered into the Employee Master Data Base. Types of changes that might be requested by Inergi's Client include new hires / rehires, terminations, leave of absence (e.g., long term relief / long term disability / maternity leave), or job rate changes. Changes are communicated to Inergi Payroll Services by Inergi's Client via electronic or hard copy Change Request documentation as applicable. A Change Request may be initiated by Inergi's Client's Human Resources Group, Work Force Acquisition (WFA), or Line Management. Change Request documentation for new hires or rehires is provided to Inergi Payroll Services as part of a package which includes the following documents: New Hire / Rehire Form Change Request, Employee Offer Letter, Employee Banking Information and Employee Income Tax Authorization Form. For changes to the Employee Master File for all types of Inergi's Client's employees (Basic, Casual Trades and Non-represented) the Inergi Pay Administrator checks the Change Request for completeness before entering them into the SAP Payroll system. Prior to executing the final Pay Run, a report is extracted from the SAP Payroll system listing all of the changes to the Employee Master File performed Inergi Payroll staff. The Inergi Pay Specialist assigns the manually entered changes made affecting employees' pay, benefits or entitlements, based on SAP Infotypes that were updated, to an independent member of the Payroll Service team to complete a review and sign off. If the information in the Request backup package does not agree with the Change Request, Payroll Services follows-up directly with the requestor.

Master data changes related to terminations or Leave of Absence/Return from Leave that are submitted by Inergi's Client via interactive forms with built in validations are loaded by Payroll Services into SAP. If the information in the Request backup package does not agree with the Change Request, Payroll Services follows-up directly with the requestor.

Master data changes that have retroactive payment impact to the employees' pay, the wage register, the wage type reports, pay advices or pay simulations are generated by the Payroll Administrator and reviewed by a second member of the Payroll Services team.

Master data changes that are submitted by Inergi's client via batch upload requests are processed by Payroll Services into SAP. Validations are performed to confirm that the information was uploaded completely and accurately.

The Payroll system and the Employee Master Database are in SAP.

Board and Travel

Board and Travel allowances for casual trade employees are provided by Inergi's Client. The Board and Travel allowances are processed by Inergi Payroll Services staff, based on the Etime Board and Travel Report (Etime) and the TIMS Portal Reports (Portal), which are generated and uploaded weekly to SAP Payroll.

There are specific circumstances, including rejections generated in SAP, where the Board and Travel allowances line items cannot be uploaded directly into SAP Payroll. These are detailed in an exception report and entered manually by appropriate Inergi Payroll Services staff. Manual processing is required for Board and Trade Allowances for Additional Days of Boarding, backdated Etime and Portal entries, and rejections from the upload files.

For entries that are manually entered into SAP, an independent review is performed by a Pay Specialist for accuracy of input and the Pay Register report cover sheet ('control sheet') is signed off by the Payroll Specialist after this independent review.

Special Payroll Allowances

Special Payroll Allowances represent business related reimbursements and can be requested by Inergi's Client for either individual employees or in bulk for a group of employees. Each type of request is processed differently by Inergi Payroll Services. Such requests can be initiated by Inergi's Client's Human Resources, Work Force Acquisition, or Line Management functions. Inergi's Client personnel also have the ability to enter Special Allowances via the Employee Portal. Requests for Special Allowances are received by Inergi Payroll Services by either fax or email. All requests received are entered into the SAP Payroll system. Inergi's Client is responsible to determine that requests for Special Payroll Allowances are valid, complete and properly authorized in accordance with Client policies.

Approved requests are received from Inergi's Client for Special Payroll Allowances for individual Client employees are processed by appropriate Payroll Services staff, and independently reviewed and signed-off by a senior staff. Inergi Pay Administrators who process the request verify the accuracy of processing by matching the results of the change in the system to the requirements on the original request. For requests from Inergi's Client related to Bulk Allowances, the upload and verification process is handled by the Payroll Services Analyst/Manager.

Access to enter changes to the Employee Master database, which includes maintaining special allowances, in the Payroll system, is restricted to appropriate Inergi staff, and is segregated from Inergi staff with access to payroll processing functions (run Pay Confirm). On a quarterly basis Inergi staff access to maintain employee master data for Inergi's client's employees within SAP, including access to process special allowances as provided by the roles is reviewed for appropriateness by Inergi management, based on data provided by Inergi's client.

Timesheet Exception Data

Timesheet Exception Data, such as Overtime, Vacation Time, or Time-off due to Illness for example, is uploaded daily to SAP Payroll from the time capturing systems. This batch processing is managed and monitored by TSDC-IT. Any errors noted within the daily batch job log report are resolved by Inergi's client.

Inergi's client is responsible for processing Time Exception Reports for all employees.

Pay Processing

Payroll is processed on a weekly basis for Casual Trades staff on a biweekly basis for Basic (represented) and MCP (non-represented) staff. The SAP system is set up to automatically pay employees according to their standard hours, and taking Timesheet Exception Data and Special Payroll Allowances into account.

After the Pay Run is confirmed, Payroll Services performs a check to review and investigate any SAP generated error reports (e.g. queries defined over negative net pay, employees on maternity leave with pension plan deduction, missing TD1 tax information). Warnings and corrections are reviewed and corrective action is taken where appropriate.

Verification procedures are performed using a set of predefined queries including pay amounts, earnings code, tax wage loss plans, etc. The Pay Specialist, Payroll Services reviews exception reports and verifies exceptions against source documents or through Inergi's client contact as required prior to each pay run.

After the Final Pay Run is confirmed, the Payroll Specialist generates and reviews the SAP Gross Earnings report for Casual Trades employees with a gross earning greater than $4,000 and for Basic and MCP employees with a gross earnings greater than $8,000.

The Payroll Specialist reviews the report and where ever required, the amount paid on the report is correlated with the appropriate details to be paid as per the employee's time sheet or other details from Inergi's client. The Senior Financial Analyst, Pay Services or Payroll Manager, reviews and signs off the report as evidence of review.

Terminations and retirements are processed based on an approved termination/retirement package provided by Inergi's client.

Terminations and Retirements package information is submitted to a SAP inbox by Inergi's client via electronic Smart Forms. Inergi monitors the SAP Inbox to ensure the requests are processed in a timely manner. Final payments for terminations and retirements, except for the parked vacation payout component for MCP employees, are calculated in the SAP system, based on electronic Smart Form requests submitted directly into the SAP system by Inergi's client. For the parked vacation payout component for MCP employees the calculation is performed manually and entered into SAP. An independent member of the Pay Services team reviews and approves the manual calculation prior to processing.

At least one unique Pay Run ID is assigned to each pay calendar entry. The creation of Pay Sheets from each pay cycle, are uniquely identified by these IDs.

Posting to the General Ledger

After the Pay Run is confirmed, Payroll Services performs a check to review and investigate any SAP generated error reports (e.g. queries defined over negative net pay, employees on maternity leave with pension plan deduction, missing TD1 tax information). Warnings and corrections are reviewed and corrective action is taken where appropriate.

Verification procedures are performed using a set of predefined queries including pay amounts, earnings code, tax wage loss plans, etc. The Pay Specialist, Payroll Services reviews exception reports and verifies exceptions against source documents or through Inergi's client contact as required prior to each pay run.

On a monthly basis, the Payroll Summary Report is reconciled with the GL Payroll Liability Accounts. The reconciliation is prepared by a member of the Accounts Analysis Group and reviewed by an appropriate independent Inergi personnel. The reconciliations are approved by appropriate independent Inergi personnel as indicated in the Account Control listing provided by Inergi's client.

On a monthly basis, a member of the Accounts Analysis Group reconciles the Payroll bank account details to the SAP Payroll GL accounts. The reconciliation is reviewed and approved by appropriate independent Inergi personnel as indicated in the Account Control listing provided by Inergi's client. The Pensioner bank account is reconciled by Inergi's Client.

After each pay is confirmed, the Payroll Analyst reconciles the total direct deposit as per the bank file with the wage type report and payroll journal from SAP. The reconciliation also includes a variance analysis of gross pay report. Explanations for any variance greater than $250,000 are included in the analysis.

File Transfer to Banks

Upon the execution of the Final Pay Run, a file is automatically created for Direct Deposit payments. The Pay Analyst/Manager transmits the file to the bank after the Direct Deposit reconciliation has been reviewed and approved.

Cheque Printing

Inergi's Pay Services sends an email to Inergi's Accounts Payable indicating that an electronic Pay Cheque file will be generated. Accounts Payable produces the cheques using the SAP Cheque Payment module and provides them to Inergi Payroll Services. Payroll Services verifies total number of cheques received from AP by matching the Cheque Register from the Payroll system.

Only off-cycle cheques that are approved are generated. A 'Request for Correction of Pay' form is prepared, in case of correction to pay, by the Payroll Administrator. The off cycle payment request is reviewed for accuracy against the approved request by an independent member of the Payroll Services Team.

In addition, the off cycle workbench result report is reviewed and confirmed as accurate against the approved requests by an independent member of the Payroll Services Team.

Report Generation

The following Reports are created from the SAP Payroll system for Inergi's Client in accordance with contractual requirements:

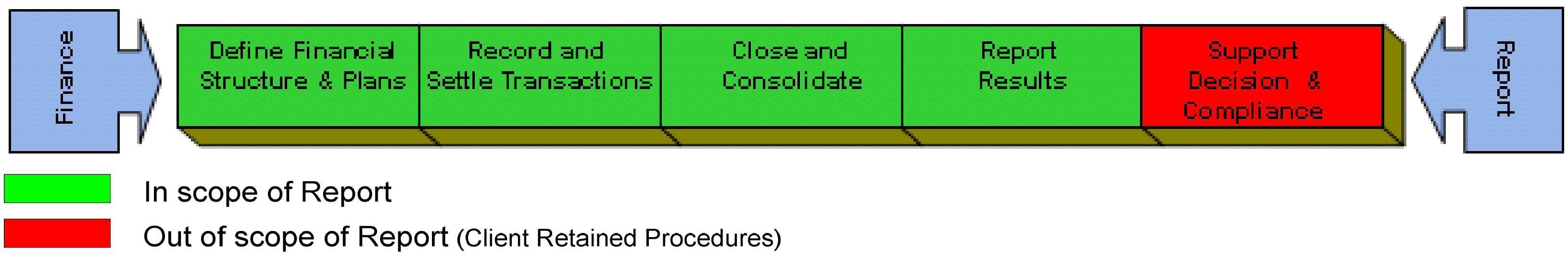
- Client Employee Vacation Entitlement Reports (annually);
- Supplementary Pay Data Reports for time exceptions and allowances (monthly); and
- Client Employee Sick-Leave Reports (quarterly).

Remittances / Reporting

- Statutory and Non-Statutory Remittances;
- Year End Payroll Reporting; and
- Payroll Compliance.

Inergi's Payroll Administrator prepares a weekly reconciliation for the Canada Revenue Agency Payroll Remittance using a report from the Payroll system (i.e., Tax Submission Summary). Inergi Payroll Services monitors for any legislative changes and implements the changes as required. System updates and changes received from SAP are reviewed by Inergi and approved by Inergi's Client before implementation.

Record to Report



The General Ledger is maintained in SAP.

The chart of accounts, controlling area, company codes, cost center accounting, profit centers, segment reporting, etc. are the financial organization and master data elements that support the maintenance of the General Ledger in SAP.

Chart of Accounts:

A chart of accounts provides a framework for recording of values to ensure an orderly rendering of accounting data. GL accounts contained in the chart of accounts configured in SAP can be used by more than one company code. For each GL account, the chart of accounts contains the account number, the account name, and technical information. A chart of accounts must be assigned to each company code. A company code can also be assigned multiple charts of accounts but one of them would be the primary chart of account and the others secondary. Three different charts of accounts have been configured as part of Cornerstone Phase II namely, leading ledger IFRS, non-leading ledger GAAP / Regulatory, non-leading ledger US of A (Uniform System of Accounting). Ledgers are to be differentiated by a two digit code in this case L0, N1 and N2 respectively. The US of A COA will use 4 digits. Each (6 digit) GL account must be setup with an associated (4 digit) US of A account. This would be displayed through a separate field associated with the GL account such as description. As a general note, every GL journal entry must be assigned to either a cost center or a profit center. This is to ensure a segment is associated with every entry for the purposes of Segment Reporting.

Controlling Area:

The SAP Controlling Area is an organizational unit within a company, used to represent a business organization from a cost accounting perspective. It is the highest organizational unit in SAP and may include single or multiple company codes. There has been one controlling area set up for Inergi's client to provide an overall view across the organization for management reporting.

Company Codes:

Company code is the smallest organizational unit of Financial Accounting for which a complete self-contained set of accounts can be drawn up in SAP per standard design for purposes of external reporting. This includes the recording of all relevant transactions and generating all supporting documents required for financial statements. Company codes represent a legal entity. A company code is within one country, uses one local currency and has one chart of accounts. As per naming convention adopted a company code should have four digits and the first two set of digits will be sequential. Example for company codes set up: 1100 is the company code for Inergi's client.

Cost Centers:

A cost center is an object used to collect costs in order to facilitate cost planning, reporting, and decision-making. A cost center represents the source assignment of the cost. In other words, it represents the location where the cost was incurred. The standard cost center hierarchy is a tree structure that groups cost centers together. The cost center standard hierarchy is the means of structuring an organization from a cost accounting point of view so that expenses can be tracked to the areas of business responsible to them.

Profit Centers:

A profit center is a management-oriented organizational unit used for internal controlling. Profit Center Accounting (PCA) divides the company into profit centers and enables the analysis of areas of responsibility and the delegation of responsibility to decentralized units. Inergi's client's profit center standard hierarchy reflects the organization structure (by Line of Business)

Segment Reporting:

Segment is one of the standard account assignment objects in SAP to provide analysis at a level below company code. The segment is assigned in the master record of a profit center. The segment is then derived from the assigned profit center during posting.

Define Financial Structure & Plans

Inergi's Client is responsible for the completeness and accuracy of changes to the Chart of Accounts. With the exception of the accounts that are deemed 'shared', where no individual can be identified to be solely responsible for, such as conference, training costs, etc., Inergi's Client has established an individual to be the designated Account Owner who is charged with the responsibility to ensure that the account is reconciled on a regular basis, and that variance explanations are provided. Inergi General Accounting has the sole responsibility with the necessary system security to maintain the GL Chart of Accounts. General ledger account structure changes are approved by Inergi's Client's Finance Manager, Corporate Accounting and submitted to Inergi General Accounting for execution. The Senior Manager of Inergi General Accounting reviews the request to determine that new accounts, account de-activations, or changes to existing accounts, etc., have been processed correctly. Once processed, an electronic notification is sent to the original requestor and Inergi's Client's Finance Manager, Corporate Accounting. Inergi General Accounting maintains the records and correspondence of the original requests, approvals, and confirmations for future reference. On a periodic basis, Inergi's Client performs a review of the GL accounts to identify any inactive accounts and initiates deactivation of these accounts once inactivity has been confirmed with the Account Owner.

Only authorized users have the right to update GL master records in SAP.

Record and Settle Transactions

There are only two types of journal entries that are posted to the SAP ledger: Original Source Data Journals fed from the other financial subsystems and Manual Journal Entries which are posted directly into SAP. Original source data journals may originate outside of SAP through batch processing or from within SAP. Data coming to SAP from other systems is updated through a batch process managed and monitored by TSDC-IT. There is one interface to SAP with Integra through which journal entries are posted in SAP. Inergi General Accounting and Inergi Fixed Assets provide the services to Inergi's client to upload recurring Journal Entries. In the legacy process both manual journals as well as recurring journal entries were being processed by Inergi but now in SAP only recurring journals are processed. Requests for uploads are submitted to Inergi General Accounting or Inergi Fixed Assets mailbox. The Requestor, either a Client employee or Inergi employee, is responsible for the validity of the entries, appropriateness of accounting for the entries in accordance with GAAP, and appropriate authorization of the entries.

Original Source Journals

The General Ledger feeder application (e.g., Integra) uses batch processing for entry. Processing frequency depends on the system (e.g., Payroll process batches once per pay period, Accounts Payable processes nightly batches). During these batch runs errors if any are flagged via error reports. These are tracked and resolved. Batch processing is monitored by TSDC-IT. On a weekly basis general accounting team runs a report to check errors that occurred during the interface between SAP GL and other systems.

Journal Entries can include Project related data so that the transaction can update the Project sub-system as well as GL Accounting. Project Related transactions will flow through SAP system generated transactions from AP, MM, CO, PM or PS for direct costs charged to the project and the settlement process.

Some of the controls embedded within SAP include:

- A unique ID is produced for each Journal Entry processed;
- Restriction on posting Journal Entries to a closed period;
- Posting to special periods is restricted to authorized staff in Inergi corporate accounting for special purposes.
- Appropriate edit checks on posting date, document date, company code, ledger, account number, posting key, currency and $ amount, profit centre, useful description (journal header and lines), system user ID;
- Assignment of user ID to each Journal Entry,
- Restriction on posting Journal Entries to control accounts;
- Access to ‘open’ and ‘close’ accounting periods is restricted to appropriate and authorized personnel; and
- Access to process Journal Entries is limited to appropriate and authorized personnel.

Manual Journal Entries

The ability to upload manual Journal Entries such as accruals or deferrals has been provided to Inergi’s client or to Inergi Finance staff outside of the Corporate Accounting or Asset Management teams. The Journal Entry processor is responsible for the completeness, accuracy, and timeliness of Journal Entry Requests, and for the maintenance of adequate supporting documentation. As part of Inergi’s Client’s month-end close process, Inergi’s client’s Corporate Finance Department contacts the originator of all account-related journals exceeding $250,000 to determine the business reasons and the related report is reviewed at the month-end Financial Review Meeting by the Inergi’s client’s Corporate Controller and the Direct Reports. The Senior Manager of Inergi General Accounting is a member of the Financial Review Team. In parallel, local reviews are conducted within the Client’s organization of any operating account-related journals exceeding the local unit’s established level of materiality (e.g., $100,000). The same validation controls and error correction procedures which apply to Original Source Journals also apply the Manual Journal Entries processed through SAP.

Journal Entries with line items greater than CAD $250,000 are automatically parked for approval before posting. Approval notification will be routed through outlook email and the Financial Accounting Transaction Approvers can access the parked documents and approve or reject as necessary. Financial Accounting Transaction Approvers journals will not require approval as their approval signifies the end of the approval process.

Journal Entries with line items greater than CAD $250,000 are periodically reviewed and approved after being processed.

Use of Journal Template Spreadsheet

Inergi General Accounting uses a Journal Template Spreadsheet to facilitate the uploading of Manual Journal Entries into the GL. These Spreadsheets, including the supporting worksheets, are used to determine the completeness and accuracy of Manual Journal Entries posted to the GL. The Journal Template Spreadsheet itself resides outside of the GL system. The Template provides limited code block validation. However, once loaded to the GL system, the Manual Journal Entries are subjected to the full code block validation established in GL system.

The GL system is in SAP.

Intercompany Journals

An AP and an AR Inter Company account will exist for each company code. Each company code will be defined as a Customer and vendor with the exception of the Pension Company 3000 and Elimination Company 9900. For each pair of company codes for which there will be cross company transactions the cross company clearing accounts will be the Customer / vendor of the offsetting company. In a cross company entry when the system automatically creates the due to/from lines it will update the Customer / vendor accounts thereby creating a sub ledger of intercompany balances, by account. The GL reconciliation accounts assigned to the Customer / vendor master records will also be simultaneously updated ensuring the sub-ledger details reconcile to the GL balance.

Close and Consolidate

Month-End Entries

Inergi complies with the month-end reporting schedule established by Inergi's Client to manage the Closing Calendar. Job schedules are processed for the sub-ledgers for which Inergi is responsible. Inergi determines that the Batch Jobs are processed to meet the Client's month-end reporting schedule. The Batch Jobs are monitored by TSDC-IT. Any errors or rejections are investigated and corrected, then posted to the GL. Any trial balance adjustment Journal Entries are processed by Inergi's client's authorized employees.

The Inergi General Accounting and Inergi Asset Management Teams commence their month-end close processes in accordance with the Client endorsed schedule. Inergi's client has established and published the fiscal calendar dates for performing close period process. The Inergi Senior Manager, General Accounting, performs a series of checks and reviews to determine that Batch Job processes and the necessary Journal Entries have been completed and are reflected in the GL. Once verified, Inergi's Senior Manager, General Accounting, closes the General Ledger reporting period to ensure that no more Journal Entries are processed. The GL system does not allow a Journal Entry to be posted to a 'closed' period. Only a limited number of authorized individuals, including both Inergi's client and Inergi staff, have access to 'open' the books to post Journal Entries following the 'close'.

At year-end, the Inergi Senior Manager, General Accounting, performs the Year-End 'close' and reviews the Control Report to determine that the year-end closing balances have been rolled-forward correctly to the opening period of the next year.

Access to perform the roll forward of year end closing statements in the SAP system is restricted to appropriate personnel. On a periodic basis access by Inergi staff is reviewed by Inergi management for appropriateness and segregation of duties conflicts. This review is based on data provided by Inergi's client.

Account balances are monitored or reconciled monthly and approved by the Department Manager or designated Senior Staff. Responsibility for account reconciliations has been primarily consolidated into the Accounts Analysis Group, covering Inergi's Accounting, Finance and Payroll Services. The assignment of responsibility to review and approve reconciliations is indicated in the Account Control listing provided by Inergi's Client. Monthly reconciliations as required are submitted on a monthly basis in accordance with contractual requirements. These monthly reconciliations are first submitted for review and approval by appropriate independent Inergi personnel as indicated in the Account Control listing provided by Inergi's client before they are provided to the Client. On a quarterly basis, Inergi also provides the Client with the Quarterly Reporting Package and variance analyses, and these are submitted to a Quality Control Analyst (QCA) in the Inergi General Accounting Group who maintains a Checklist of reconciliation submission requirements and monitors for completion status. The Quality Control Analyst reviews account reconciliation completion statistics and follows-up with the responsible parties to determine the timely completion and approval of the reconciliations based on Inergi's Client's requirements. The QCA performs an independent quality review of the reconciliation prior to submission to Inergi's Client's Manager, Corporate Accounting. Any unusual items are followed-up and resolved on a timely basis. Significant reconciling items are communicated to Inergi's Client in accordance with established protocols.

In accordance with the contractual agreement, Inergi General Accounting also performs a reconciliation of Inergi's Client's internal management reporting tool (i.e., SAP Business Intelligence (BI)) to the GL system. These reconciliations are performed monthly for each general ledger account and reviewed by the Senior Manager, General Accounting.

Report Results

The SAP General Ledgers are the official source of Inergi's Client's financial statements. A set of Business Intelligence (BI) Reports are maintained by the Inergi General Accounting Group, and a senior staff member in Inergi's Client Corporate Accounting Department runs off the BI Reports to generate a number of financial and management reports. These reports are provided at the Month-end Review Meetings by Inergi's Client's Corporate Controller and senior staff. The Senior Manager of Inergi General Accounting is a member of the Monthly Review Team.

Business Unit Reporting

Business Intelligence is the primary source of financial and management information for business unit reporting and analysis. Work Performance and Human Resource data outside the SAP GL and BI are collected from other sources such as the Client's HR Data Warehouse, etc.

D. Information and Communication

Information is necessary for the entity to carry out internal control responsibilities in support of achievement of its objectives. Communication occurs both internally and externally, and provides the organization with the information needed to carry out day-to-day internal control activities. Communication enables personnel to understand internal control responsibilities and their importance to the achievement of objectives. Capgemini has a Group Communication Department which manages and monitors group-wide internal and external communication including key external publications and Annual Reports.

All Capgemini centers are part of a global service network and are consequently part of a global information and communication network. Formal corporate communications begin at the office of the Chief Executive Officer with regular company-wide communications and formal regional communications that are customized for each geographic / operational location and business unit. The communications framework provides for two-way communication that includes distribution of the corporate and operational unit organization structure and allows ad hoc upward communication as well as periodic employee feedback surveys.

New customer integration risks are identified prior to the establishment of any new contract through team-based solution design and mandatory pre-contracting solution, risk and contract economic reviews. These communication structures are retained throughout the transition period and into the delivery phases of contract services. The relationship of risk assessment, delivery team operation and information and communication is established prior to the establishment of any new contract through team based solution design and mandatory pre-contracting solution, risk and contract economic reviews. The pre-sales communication structures are carried forward after contracting in transition and full delivery phases of contract services. Routine communications of risks, operational performance, economic performance and client satisfaction provide the fundamental information and communication structures and linkage of center performance and operational and executive management of Capgemini.

Inergi tracks usage of resources, and where appropriate, works with the client to prepare forecasts. These forecasts are used to design a service delivery process that is responsive to client requirements (performed on a contract basis) along with appropriate skilled resources to support those contracted requirements. Key performance indicators for the client and service line are established to meet client needs and are reported regularly, typically monthly, to determine that agreed upon service levels are met.

SLA Measurement, Analysis and Reporting

Inergi has implemented a formal Service Level Management (SLM) process. Service-level management provides for continual identification, monitoring and review of the levels of services specified in the Service-level agreements (SLAs). The SLM process provides for a formal contract management process to add or modify Service Level Agreements.

The Customer Service Level Agreements (SLA) describes target service levels to be achieved, how they are to be measured and the assumptions on which they are based. An SLA is an agreement that specifically relates to quantitative levels of performance ("Service Levels") for certain specified services. Capgemini is contractually obligated to monitor performance against SLAs, report SLA performance monthly and achieve defined SLA service levels. Successful SLA measurement results in improved center operations and customer satisfaction.

SLAs are managed daily with the summaries of Problem Management and statistics available to the TSDC-IT service delivery managers and team leads. Standard customer reporting is published on secured customer web portals by the Centre's Measurement and Analysis Team.

Customer Satisfaction is the process of continually assessing the relationship with each customer at various levels with the goal of On Time & Above Customer Expectations (OTACE). Capgemini OTACE measurement and continuous local assessment of satisfaction with our customer performance for project deliverables comprise the customer satisfaction measurements. Customer comments are followed-up by the Account Management Team as appropriate. Customer Satisfaction Surveys are based on resolved ITSM tickets. (I.e. Percentage of Client Service Desk users which rate the service no less than "Satisfied" based on an exit survey sent to them on the completion of their ticket. This is an automated process performed by the Ticket Management System.Metric is only valid if there is a minimum response rate of 25% or more. 10% of all resolved tickets are surveyed. Service Management analyzes the data and provides management with summary information. At the Group level, OTACE results will be published externally for engagements across the Group which drives the need for a certain level of consistency across the regions. Internally, OTACE results are shown through the Delivery KPI report, the Delivery Dashboard.

Inergi distributes strategic and operational issues, at a minimum, on a monthly basis to center managers via the 'Weekly Update'. This information is then distributed to all associates of the center through individual group or team meetings. Appropriate follow-up is performed based on communication with the customer and/or review by Inergi Leadership. Inergi also holds regularly scheduled all-associate meetings to communicate center-specific and corporate-level information.

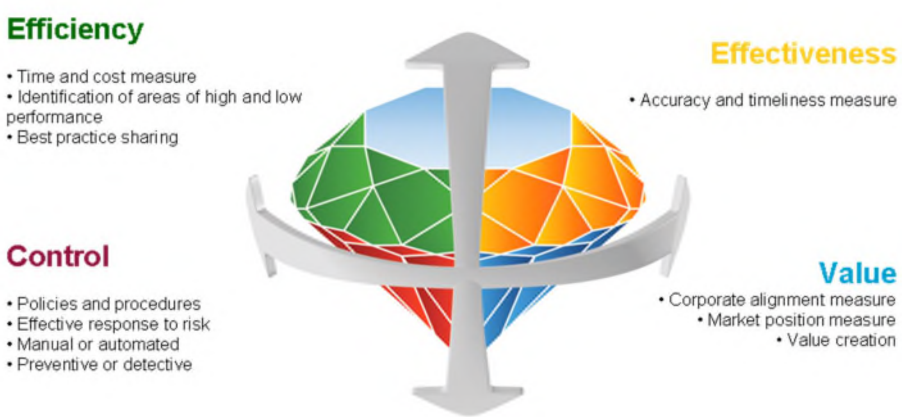
E. Monitoring Activities

Ongoing evaluations, separate evaluations, or some combination of the two are used to ascertain whether each of the five components of internal control, including controls to effect the principles within each component, are present and functioning.

Operations and controls are monitored for each client at the Account Management, Quality Assurance, Service Center Management and Region Chief Operating Officer (“COO”) levels.

- Account Management – Upon completion of the contract, service level and quality monitoring processes are established to monitor and manage service level and quality performance defined. The account management team also establishes with Inergi’s client both the OTACE client satisfaction criteria and frequency of measurement.
- Quality Assurance – For all contracts that meet certain size and complexity criteria, a quality assurance reviewer, independent from the delivery team and independent of the delivery center, performs a periodic review of all aspects delivery included in the contract. The quality assurance process, which includes direct interviews with key client personnel, includes assessment of delivery risks and mitigation plans associated with the contract.
- Service Line Management – Management of the Delivery Center routinely monitor reporting of service level and quality measurements, quality assurance review reports, and client satisfaction results.
- Region COO **–** The Region COO maintains a dashboard of quality assurance review results and customer satisfaction results for all center clients and periodically reviews those results with the center manager. The Regional COO also conducts monthly meetings with the leaders of each center to discuss center results, and client and organization information relevant to center performance. The Region COO has established an escalation protocol to assure

In addition, Capgemini has a broad range of metrics and use internal Diamond KPI. These are progressively being mapped across Clients and to benchmark data.



Inergi management and supervisory personnel monitor the quality of internal controls as a normal part of their activities. Exceptions to normal activities are documented, reported and resolved as appropriate. As required, Inergi utilizes Service Delivery Escalation procedures to inform customer contacts of exceptions to daily activities. In addition, results of periodically scheduled audits (e.g. AT Section 801/ ISAE 3402) as well as Centre certification initiatives (e.g. ISO 9000) are addressed as required in order to determine that both internal and customers are satisfied. The Inergi intranet is updated on a regular basis as policies, procedures and controls change.

Capgemini has implemented policies and procedures around protecting its confidential information and intellectual property. Capgemini management and supervisory personnel are expected to take necessary steps to protect any assets and resources of the company which are under the company's control against loss, theft and unauthorized disclosure.

F. Complementary User Entity Controls

The associated control policies and procedures performed by Inergi address only a portion of the overall internal control structure of each Inergi client. It is not feasible for the control objectives related to the processing of transactions to be solely achieved by Inergi. As such, Inergi has provided Complementary User Entity Controls (CUEC) in this section of the report. Following are the general definitions of the control objectives:

- Completeness: All transactions that occurred are entered and accepted for processing.
- Accuracy: Transactions are recorded at the correct amount, in the appropriate account, on a timely basis (in the proper period).
- Validity: All recorded transactions actually occurred (are real), relate to the organization, and were approved by designated personnel.
- Restricted Access: Transaction processing and data is protected against unauthorized amendments, its confidentiality and physical assets are protected.

Therefore, each Inergi client must evaluate their own internal control structure in conjunction with the control policies and procedures in the information provided by the Independent Auditor.

The lists of user-organization complementary controls presented below do not represent a comprehensive set of all the controls that should be employed by user organizations. Other controls may be required at user organizations.

1. Inergi’s client is responsible to provide timely and complete communication of any changes to requirements which may impact the business processing service. (Section III)
2. Inergi’s client is responsible for ensuring that they meet their requirements and obligations as outlined in their respective outsourcing agreement. (Section III)
3. Inergi’s client accepts responsibility for analyzing and accepting the associated risks for the exemptions noted. (Control Objectives 1, 4)
4. Inergi’s client is responsible for authorizing their employees’ access to the systems managed by Inergi. (Control Objective 1, 2, 4)
5. Inergi’s client is responsible for reviewing and validating the General Ledger reconciliations provided to the client by Inergi. (Control Objective 1,6, 7, 12, 13, 14, 15, 17, 21)
6. Inergi’s client is responsible to provide complete, accurate and authorized data to Inergi for setup of new accounts and for changes to existing accounts on SAP. (Control Objective 1, 6)
7. Inergi’s client is responsible for changes to existing Interval Metered accounts in SAP. (Control Objective 1)
8. Inergi’s client is responsible for the completeness and accuracy of Business Partner setup data in IEE. (Control Objective 1)
9. Inergi’s client is responsible for the completeness and accuracy of information in the “Bill Check” tool and to provide complete and accurate reports as follows (Control Objective 1, 4, 6):
    - list of Letters of Credit to be reviewed two months prior to expiration date
    - Interval meter usage reports

- Reports which identify all manual interventions to Complex Billing Contracts (Bill100/ RESOP Report, Manual Adjustments by Employee Report, Manual Adjustments by Complex Contracts Report)
- Daily Settlement of Preliminary Statement report for use in the energy reconciliation
- Monthly Settlement of Preliminary Transmission Reconciliation Data File (TRDF) report for use in the transmission reconciliation "Eligible to Cut" list

10. Inergi's client is responsible for establishing the thresholds within SAP which result in Meter Reading exceptions and Billing and Invoicing outsorts. (Control Objective 1,2,4, 6)
11. Inergi's client is responsible for the completeness and accuracy of information in MTCCA, and to monitor the errors through to resolution except where Inergi has been assigned the responsibility for monitoring the errors through to resolution. (Control Objective 1, 2, 4, 6)
12. Inergi's client is responsible for monitoring and resolving synchronization errors occurring when accounts have a change in their meter information. (Control Objective 1)
13. Inergi's client is responsible for the completeness, accuracy and validity of retailer enrolled setup and updates in SAP. (Control Objective 1, 2, 3, 4, 5)
14. Effective May 1, 2015, Inergi's client is responsible for the setup of the technical portion of Interval Metered accounts in SAP. (Control Objective 1)
15. Inergi's client is responsible for ensuring that the interval meter data is totalized completely and accurately and that appropriate loss factors are applied. (Control Objective 2)
16. Inergi's client is responsible for the completeness and accuracy of the interval meter data collected and that the interval meter data is subject to reasonable validation, estimation and editing checks and providing the information for upload into SAP. (Control Objective 2, 3, 6)
17. Inergi's client is responsible for the completeness, accuracy and validity of the non-interval meter data collected and providing the information for upload into SAP. (Control Objective 2, 3, 6)
18. Inergi's client is responsible for transferring meter data, Street Light Load Data, Net System Load Shape (NSLS) and Weighted Average Global Adjustment (WAGA) completely and accurately from IEE to SAP. (Control Objective 2, 3, 5, 6)
19. Inergi's client is responsible for identifying and resolving No Bill exceptions for Non Interval Metered Accounts. (Control Objective 2, 4, 6)
20. Inergi's client is responsible for resolution of meter data exceptions, generator statement exceptions, billing outsorts and invoice outsorts handled by Inergi's client personnel. (Control Objectives 2, 4, 6)
21. Inergi's client is responsible for providing the OEB approved rates for the calculation of Business Partner bills on a timely basis for use within the appropriate revenue related processing systems. (Control Objective 4, 5)
22. Inergi's client is responsible for submitting authorized and tested rate change requests to Inergi on a timely basis. (Control Objective 4)
23. Inergi's client is responsible for the completeness, accuracy and validity of invoices created in SAP. (Control Objective 4, 7)
24. Inergi's client is responsible for the completeness and accuracy of the billing data file produced from their Joint Use Billing Database. (Control Objective 4)

25. Inergi's client is responsible for the reasonableness, authorization and timeliness of the Net System Load Shape (NSLS) data provided to Inergi in order to calculate the NSLS Weighted Average Hourly Spot Price. (Control Objective 4, 5)
26. Inergi's client is responsible for the reasonableness, authorization of the cycle unbilled revenue accruals and that it is provided to Inergi on a timely basis. (Control Objective 4)
27. Inergi's client is responsible for the completeness, accuracy and authorization of sales orders in SAP. (Control Objective 4)
28. Inergi's client is responsible to provide the OEB approved Street Light Load Shape data to Inergi on a timely basis in order to calculate the Street Light Weighted Average Hourly Spot Price. (Control Objective 4, 5)
29. Inergi's client is responsible for the follow up of variances identified by Inergi in the review of daily MDM/R comparison reports. (Control Objective 4)
30. Inergi's client is responsible for clearing mismatches above $15 related to prepayments. (Control Objective 4)
31. Inergi's client is responsible for the review and management of the provision account related to prepayments. (Control Objective 4)
32. Inergi's client is responsible for the design and approval of roles that can be assigned to users within SAP and the verification that authorities (via profiles, t-codes, objects) are appropriately assigned to and segregated within and between roles. The design and approval of roles includes permitted roles and combinations of roles per function communicated to Inergi. (Control Objective 1, 2, 4, 6,7, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21)
33. Inergi's client is responsible for completeness and accuracy of the current SAP user ID's and corresponding security groups included in the SAP user access data presented to Inergi for their periodic user access reviews. This includes composite roles, simple roles and t-codes assigned to users providing access levels and segregation of duties. (Control Objective 1, 2, 4, 6, 7, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21)
34. Inergi's client is responsible for the identification and approval of segregation of duties authorities within and between roles that are assigned to users within SAP. In the case of approved excessive access or segregation of duties conflicts, Inergi's client is responsible to notify Inergi thereof. (Control Objective 1, 2, 4, 6, 7, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21)
35. Inergi's client is responsible for collecting the interval meter data completely and accurately for retail generators and that it is subject to reasonable validation, estimation and editing checks and providing the information for upload into SAP (Control Objective 6)
36. Inergi's client is responsible for providing authorized, complete and accurate interval and non-interval meter readings in SAP. (Control Objective 6)
37. Inergi's client is responsible for generator invoice approvals in SAP. (Control Objective 6)
38. Inergi's client is responsible for reviewing and appropriately approving the package containing the declaration and supporting documentation for submittal by Inergi to the IESO for Rate Protection Plan. (Control Objective 6)
39. Inergi's client is responsible for totalizing the interval meter data completely and accurately and that appropriate loss factors are applied. (Control Objective 6)
40. Inergi's client is responsible to provide complete, accurate and approved monthly declaration values, including a summary of the billed data for non-fixed price consumption, are provided to Inergi for use as input to the Bill 100 package submission to the IESO. (Control Objective 6)
41. Inergi's client is responsible to determine that complete, accurate and authorized data is provided to Inergi in order to update generator accounts, except where Inergi has been assigned the responsibility to review HST and banking information for microFIT accounts. (Control Objective 6)
42. Inergi's client is responsible for reviewing and appropriately approving manual billing adjustments entered by Inergi's client. (Control Objective 6)

43. Inergi's client is responsible for the resolution of discrepancies identified by Inergi in the review of invoices which did not result in a posting to the GL and AR Sub-ledger. (Control Objective 7)
44. Inergi's client is responsible for ensuring access to the Microsoft CRM system is appropriately restricted. (Control Objective 7)
45. Inergi's client is responsible for the completeness, accuracy and validity of the data within, and the data processing integrity of, the Microsoft CRM system. (Control Objective 7)
46. Inergi's client is responsible for the completeness, accuracy and timeliness of instructions to apply payments to Business Partner's accounts/ AR GL account in SAP. (Control Objective 7)
47. Inergi's client is responsible for the reasonableness, authorization, and timeliness of adjustments/write-offs to Accounts Receivable and provisions for doubtful accounts, except where Inergi has been delegated authority in accordance with approved limits. (Control Objective 7, 8)
48. Inergi's client is responsible for completeness, accuracy and appropriate authorization for procurement related requests. (Control Objective 9)
49. Inergi's client is responsible to determine that purchases for which the client is responsible for processing are authorized and processed completely and accurately. (Control Objective 9)
50. Inergi's client is responsible to determine that purchases greater than $50,000 are appropriately approved. (Control Objective 9)
51. Inergi's client is responsible to determine that sole sourced purchases are appropriate and authorized. (Control Objective 9)
52. Inergi's client is responsible for authorizing vendor creation or changes to vendor files. (Control Objective 10)
53. Inergi's client is responsible for the completeness and accuracy of Goods Receipted through SAP and for providing complete and accurate instruction to Inergi to perform Goods Receipt in SAP. (Control Objective 11)
54. Inergi's client is responsible to determine that complete, accurate, and appropriately approved expense reports and cheque requisitions (except those from the various electricity settlement processes) are submitted to Inergi for processing. (Control Objective 11)
55. Inergi's client is responsible to determine that the SAP workflow system that routes authorization requests is configured to require the correct level of authorization. (Control Objective 7, 11)
56. Inergi's client is responsible to determine that Limit based PO Invoices, Cheque Requisitions, and non-PO Invoices are authorized. (Control Objective 11)
57. Inergi's client is responsible for the complete and accurate update of users in the HRP1001 table in SAP on request from the Inergi access provisioning process, to maintain adequate segregation between invoice entry and invoice approval for non-PO Invoices. (Control Objective 11)
58. Inergi's client is responsible for the performance of period-end close procedures (including accruals) other than those performed by Inergi, to determine the completeness and accuracy of the client's financial statements and related financial reporting. (Control Objective 11, 21)
59. Inergi's client is responsible for controls over processing of wire transfers, including appropriateness of access privileges to input Wire Transfers. (Control Objective 12)
60. Inergi's client is responsible for the follow-up of discrepancies identified by Inergi in the AP Bank Account reconciliations. (Control Objective 12)
61. Inergi's client is responsible for ensuring the timeliness of project closures in SAP. (Control Objective 13)

62. Inergi’s client is responsible for completeness, accuracy, and validity of various cost components (including write-offs) charged to the projects. (Control Objective 13)
63. Inergi’s client is responsible for initiating transfers from Work Breakdown Structure to Asset Under Construction, and for the completeness and authorization of the Request for Equipment in Service form provided to Inergi. (Control Objective 13)
64. Inergi’s client is responsible for the completeness, accuracy and authorization of capital projects information sent to Inergi for project setup in the SAP System. (Control Objective 13)
65. Inergi’s client is responsible for the identification and closure of dormant projects. (Control Objective 13)
66. Inergi’s client is responsible for the identification and allocation of costs applied to closed projects. (Control Objective 13)
67. Inergi’s client is responsible for the accuracy, validity and completeness of the fixed asset master data. (Control Objective 14, 16)
68. Inergi’s client is responsible for reviewing the accuracy, completeness and validity of the Major Fixed Asset capitalizations. (Control Objective 14)
69. Inergi’s client is responsible for accuracy, validity and completeness of the Sales or Retirement of Fixed Assets. (Control Objective 15)
70. Inergi’s client is responsible to determine that retirements and adjustments of fixed assets are authorized and provided to Inergi on a timely basis. (Control Objective 15)
71. Inergi’s client is responsible for the review of the Average Unit Price Report and approving actions taken based on that review. (Control Objective 17)
72. Inergi’s client is responsible for authorization and timeliness of information sent to Inergi by client employees for setup or changes to the material master files. (Control Objective 17)
73. Inergi’s client is responsible for performing physical inventories count and the completeness, accuracy and authorization of adjustments provided to Inergi. (Control Objective 17)
74. Inergi’s client is responsible for the completeness, accuracy and validity of the goods receipted and goods issued through SAP inventory. (Control Objective 17)
75. Inergi’s client is responsible for completeness, accuracy, validity and appropriate authorization of requests regarding special payroll allowances (which includes Board & Travel allowances) for client employees. (Control Objective 18)
76. Inergi’s client is responsible for pension calculations. (Control Objective 18)
77. Inergi’s client is responsible for the completeness and accuracy of requests for changes to the client Employee Master file. (Control Objective 18)
78. Inergi’s client is responsible for review of the payroll master file change report to verify the completeness, accuracy and validity of the changes (Control Objective 18)
79. Inergi’s client is responsible to provide authorized changes to the chart of accounts to Inergi on a timely basis. (Control Objective 19)
80. Inergi’s client is responsible for the initiation, completeness, accuracy and validity of manual journal entry requests provided to Inergi, and those trial balance adjustments posted by client’s employees. (Control Objective 20)

81. Inergi's client is responsible to identify, authorize and communicate necessary changes to account mapping to financial systems. (Control Objective 20)
82. Inergi's client is responsible for establishing the Fiscal Calendar. (Control Objective 21)
83. Effective February 1, 2016, Inergi's client is responsible for the Revenue Accrual Journal Entries in SAP. (Control Objective 21)

G. Listing of Applications that Contribute to Inergi Control Objectives

System Acronym	System Name	Function	Business Cycle(s)	Account(s)
SAP	SAP	The SAP system is used for: • Purchasing; • Accounts Payable; • Inventory Management; • Work Order Management; • General Ledger; • Asset Management; • Project Costing; • Billing/Accounts Receivable (for energy and non-energy related billings); • Human Resources/Payroll; and • Printing cheques.	Enrollment to Setup, Meter to Cash, Purchase to Pay, Authorize to Complete, Hire to Pay, Record to Report	Purchases, Accounts Payable, Cash, Cost of Goods Sold, Inventory, Revenue, Accounts Receivable, Depreciation Expense, Accumulated Depreciation, Capital Gain/Loss, Capital, Construction in Progress, Various Suspense Accounts, Payroll
Radix UMS	Radix Utility Management System	Radix UMS is an independent software program used for collecting the non-interval meter reading.	Meter to Cash	Revenue, Accounts Receivable
TD Beanstream	TD Beanstream Credit Card System	TD Beanstream is the credit card system accessed via TD website for applying credit card payment by the CCC agents.	Meter to Cash	Cash, Accounts Receivable
SAP BI	SAP – Business Intelligence	BI is used extensively as an analytic and reporting tool by the finance staff in Inergi and Inergi's client. It captures financial transactions daily from SAP.	All	All

System Acronym	System Name	Function	Business Cycle(s)	Account(s)
MDM/R	Meter Data Management Repository	Meter Data Management Repository is a data storage and management system which: • Provides ways to create and maintain Unique Service Delivery Points (USDP's) for use in SAP • Receives and validates meter read data from Advanced Metering Control Computers (AMCC's) • Provides editing capabilities • Provides data estimation capabilities • Produces and Sends billing quantity data • Provide Reports	Meter to Cash	Revenue, Accounts Receivable
CMIG	Customer Migration Tool	CMIG is a web-based, meter reading system which has meter data updated by Inergi's client	Meter to Cash	Revenue, Accounts Receivable
Microsoft CRM	Microsoft Dynamics CRM	CRM is used to capture information related to Distributed Generation Application cheques received	Meter to Cash	Revenue, Accounts Receivable
SAP CRM	SAP – Customer Relationship Management	The SAP system addressing the needs of Inergi's Client in the generation, transmission and distribution, retail and services of energy. This system covers the following: • Intercompany Data Exchange (IDEX) • Energy Data Management (EDM)	Meter to Cash	Revenue, Accounts Receivable
SAP XI	SAP – Exchange Infrastructure for Process Integration	The SAP system used to facilitate the exchange of information among Inergi's Client's internal software and systems and those of external parties.	All	All

System Acronym	System Name	Function	Business Cycle(s)	Account(s)
IEE	Itron Enterprise Edition	This is the system used to manage and store the Meter Data for Interval Meter Business Partners. Inergi's client controls and operates the system and manages the data. IEE is an enterprise-scale data warehouse that receives loss-adjusts, totalizes and stores meter data for Inergi's client's interval metered Business Partner s. It also stores other data, such as meter data received from the IESO for Inergi's client's wholesale meters, Net System Load Shape, Hourly Ontario Energy Price and the Street Light Load Profile.	Meter to Cash	Revenue, Accounts Receivable
MTCCA	Meter To Cash Composite Application	This is a custom tool within the SAP CRM module used to manage the exceptions and outsorting functions within the SAP CRM system	Meter to Cash	Revenue, Accounts Receivable
iCare	SAP iCare	The portal (front end GUI) within SAP CRM used by Agents to create, make changes, verify information at a business partner / contract account level	Enrollment to Setup,	Revenue, Accounts Receivable
EDM	Energy Data Management	Component of SAP Customer Relationship and Billing which is a solution used for billing of interval metered customers including retail and wholesale	Meter to Cash	Revenue, Accounts Receivable
IDEX	Intercompany Data Exchange	Module within SAP ECC whose functionality rests in SAP Customer Relationship and Billing and SAP PI. IDEX is the module through which EBT (Electronic Business Transactions) messages are exchanged between Inergi's Client and Retailers, Generators, etc.	Meter to Cash	Revenue, Accounts Receivable
FICA	Financials and Contract Accounts	FI-CA is a module of SAP which is related to accounts receivable and payables management for utility industries. The FICA acts as the AR sub ledger and AP sub ledger for energy billed accounts which is linked to the GL in FICO module	Meter to Cash	Revenue, Accounts Receivable, Cash, Cost of Goods Sold, Accounts Payable
Numero	Numero	The retailer group within BCC monitors billing problems or issues reported by retailers through a web based tool called Numero	Meter to Cash	Revenue, Accounts Receivable

System Acronym	System Name	Function	Business Cycle(s)	Account(s)
HPQC	Hewlett Packard Quality Centre	Application software acting as a defect management tool for retailer billing issues. This tool is outside SAP with defects logged in by Inergi users for resolution. This tool is currently used by and during CIS project alone.	Meter to Cash	Revenue, Accounts Receivable
SAP BOBJ	SAP Business Objects	This is the reporting portal within SAP and enables front end searches, assembling and presenting the data resident in the SAP Business Warehouse through reports for business users	Meter to Cash	Revenue, Accounts Receivable
Aveksa	Aveksa	Aveksa is used to conduct the periodic application access reviews. The Aveksa system is designed, operated and maintained by Inergi's client	All	All

Section IV

IV. Information Provided by the Independent Service Auditors – Control Objectives, Control Activities and Tests of Operating Effectiveness

This report on the controls surrounding the control environment and business process outsourcing services is intended to provide Inergi's client with information sufficient to understand the controls in place over business process outsourcing services located in Toronto and Markham, Ontario, Canada. A service auditor's report on a service organization's description of controls, that may be relevant to a user organization's internal control as it relates to an audit of financial statements, provides information regarding the suitability of controls per the specified control objectives, assurance that the stated controls had been placed in operation as of a specific date and the results of testing effectiveness for the stated audit period. Such reports may be useful in providing a user auditor with an understanding of the controls necessary to plan the audit and to design effective tests of controls and substantive tests at the user organization, but are not intended to provide the user auditor with a basis for reducing his or her assessments of control risk below the maximum.

Our examination was restricted to the control objectives and the related controls set forth by Inergi management in Section IV of this report, which Inergi management believes are the relevant controls. This report was prepared according to the guidelines contained in the AICPA AT Section 801, Reporting on Controls at a Service Organization and the International Standard on Assurance Engagements 3402 (ISAE 3402), Assurance Reports on Controls at a Service Organization.

It is the customer's responsibility to evaluate this information in relation to the internal controls in place within the client's organization in order to assess the overall effectiveness of internal controls. If adequate internal controls are not in place within Inergi's client's organization, Inergi's controls may not compensate for the absence of such controls. Refer to Complementary User Entity Controls in Section III of this document.

Exemptions from Testing

Inergi is temporarily exempted from the requirement to comply with certain controls by Inergi's client and accordingly these controls have not been tested. Inergi's client is responsible for assessing the risk and potential impact of those exemptions on their control environment. Where exemptions exist these are noted in the 'Results of Testing' column. For these controls placed in operation and operating effectiveness cannot be concluded upon.

Control Procedures

These policies and procedures have been placed in operation by Inergi and are intended to help achieve the related control objectives.

Testing of Operating Effectiveness

PricewaterhouseCoopers has performed certain tests to evaluate the operating effectiveness of the Inergi policies and procedures. PricewaterhouseCoopers has provided a description of tests performed related to each control objective.

Inquiry

Inquired of appropriate Inergi personnel. Inquiries seeking relevant information or representation from Inergi personnel were performed to obtain:

- Knowledge and additional information regarding the control, and
- Corroborating evidence of the control.

Inspection

Inspected documents and records indicating performance of the control. Inspection includes, among other things:

- Inspection of reconciliations and management reports that age or quantify reconciling items to assess whether balanced and reconciling items are properly monitored, controlled and resolved on a timely basis;
- Review of source documentation and authorizations to test propriety of transactions processed;
- Examining documents or records for evidence of performance such as the existence of initials or signatures; or
- Inspection of Inergi documentation, such as operations manuals, flow charts and job descriptions.

Observation

Observed the application or existence of specific controls as represented.

Reperformance

Reperformed the control or processing application of the control to test the accuracy of its operation. This includes, among other things:

- Obtaining evidence of the arithmetical accuracy and correct processing of transactions by either re-computing the Inergi application computation or performing independent calculations; or
- Reperforming the matching of various system records by independently matching the same records and comparing reconciling items to Inergi prepared reconciliations.

Results of Testing

The results of testing of operating effectiveness are provided by PricewaterhouseCoopers.

Control Objectives, Control Activities and Tests of Operating Effectiveness

Enrollment to Setup

1. Controls provide reasonable assurance that authorized Business Partners are setup accurately.

Meter Read to Cash

2. Controls provide reasonable assurance that authorized consumption data received from Inergi's client is completely and accurately transferred and updated into the systems.
3. Controls provide reasonable assurance that authorized Business Partner usage is calculated completely and accurately.
4. Controls provide reasonable assurance that authorized Business Partner billing charges are calculated and invoiced completely and accurately.
5. Controls provide reasonable assurance that Business Partner billing transactions are calculated and transferred completely and accurately to the correct Retailer.
6. Controls provide reasonable assurance that settlement transactions are authorized, calculated, transferred, invoiced, paid, and collected completely and accurately.
7. Controls provide reasonable assurance that authorized payment data is applied to Business Partner accounts completely and accurately.
8. Controls provide reasonable assurance that aged Business Partner accounts receivable are processed through authorized termination and write-off procedure completely and accurately.

Purchase to Pay

9. Controls provide reasonable assurance that requests for authorized purchases are processed appropriately.
10. Controls provide reasonable assurance that changes to the vendor database are complete, accurate and authorized.
11. Controls provide reasonable assurance that invoices are authorized and processed completely and accurately.
12. Controls provide reasonable assurance that authorized payments are generated completely and accurately.

Authorize to Complete

13. Controls provide reasonable assurance that authorized transactions related to projects are processed completely and accurately.
14. Controls provide reasonable assurance that fixed asset purchases and capitalizations are authorized and processed completely and accurately.
15. Controls provide reasonable assurance that fixed asset disposals are authorized and processed completely and accurately.
16. Controls provide reasonable assurance that fixed asset depreciation is calculated completely and accurately.
17. Controls provide reasonable assurance that material and supplies inventory transactions are accounted for completely and accurately.

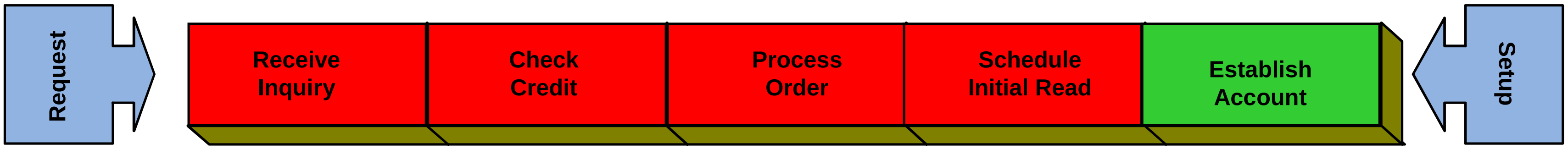
Hire to Pay

18. Controls provide reasonable assurance that payroll transactions are authorized and accounted for completely and accurately.

Record to Report

19. Controls provide reasonable assurance that authorized changes to the general ledger account structure are made completely and accurately.
20. Controls provide reasonable assurance that authorized journal entries are processed accurately.
21. Controls provide reasonable assurance that month-end close procedures are designed and executed to determine that ending General Ledger account balances are complete and accurate.

Enrollment to Setup



In scope of Report

Out of scope of Report (Client Retained Procedures)

	Control Objective	Completeness	Accuracy	Validity	Restricted Access
Transaction	1) Business Partner Account Setup	*	✓	✓	✓

<u>Control Objectives</u>

- Completeness: All transactions that occurred are entered and accepted for processing
- Accuracy: Transactions are recorded at the correct amount, in the appropriate account, on a timely basis (in the proper period)
- Validity: All recorded transactions actually occurred (are real), relate to the organization, and were approved by designated personnel
- Restricted Access: Transaction processing and data is protected against unauthorized amendments, its confidentiality and physical assets are protected

* – Completeness over Business Partner account setup is not in the scope of the controls. The risk of incomplete Business Partner setup is operational, as the Business Partner cannot receive services until being set up and therefore, a financial transaction cannot occur.

Control Objective 1: Controls provide reasonable assurance that authorized Business Partners are setup accurately.								
Description of Controls								
CA #	**Control Description**	**FS Assertion**	**Control Objective**	**Account**	**Control Type**	**Frequency**	**Testing of Operating Effectiveness**	**Results of Testing**
Business partners with Non-Interval Meters AND FIT/MICROFIT GENERATORS								
	New Business Partner							
1.01	For new Business Partner set up on SAP, the system requires mandatory fields (customer name, address and phone number) to be completed, as Call Center staff enter Business Partner information into SAP.	Existence / Occurrence	Validity	Revenue, Accounts Receivable	Automated	Event Driven	Observed the attempt of creating a new Business Partner to determine whether the system prevented the creation of a new Business Partner without entering all mandatory fields (customer name, address and phone number). Inquired of Application Support personnel to determine whether SAP automatically performs field validations for mandatory fields.	No exceptions noted.
	Account Creation and Maintenance							
1.02	New Business Partner and Contract accounts are created and activated only when the Business Partner name and premise information are combined in SAP, supplemented by a meter route, billing cycle, initial read	Existence / Occurrence, Completeness	Accuracy	Revenue, Accounts Receivable	Automated	Event Driven	Observed the attempt of activating a new contract account to determine whether the system prevented the activation of the new account if all	No exceptions noted.

Control Objective 1: **Controls provide reasonable assurance that authorized Business Partners are setup accurately.**

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
	and device provided by Inergi's client.						mandatory fields (Business Partner information, Premise information, Device ID, billing cycle, meter route and an initial read) were not entered. Inquired of Application Support personnel to determine whether SAP automatically performs field validations for all mandatory fields and a contract account is created and activated only when all mandatory fields are entered; i.e., the Business Partner name and premise information are combined in SAP and supplemented by a meter route, billing cycle, initial read and device provided by Inergi's client.	
1.03	SAP prevents billing of contract accounts which have been final billed.	Existence / Occurrence	Validity	Revenue, Accounts Receivable	Automated	Event Driven	Re-performed the attempt to bill a contract account that	No exceptions noted.

Control Objective 1:
Controls provide reasonable assurance that authorized Business Partners are setup accurately.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
							has final billed to determine whether the system prevents further billing on this contract account. Inquired of Application Support personnel to determine whether SAP prevents billing of contract accounts that have final billed.	
1.04	SAP assigns a unique number (ID) for each contract account, created based on a predefined number range in SAP.	Existence / Occurrence	Accuracy, Validity	Revenue, Accounts Receivable	Automated	Event Driven	Observed an Application Support personnel create a contract account to determine whether SAP assigns a unique account ID. Inspected a sample of active accounts to determine whether the account ID is unique to each contract account. Inquired of BCC personnel to determine whether SAP assigns a unique account identification number	No exceptions noted.

Control Objective 1: **Controls provide reasonable assurance that authorized Business Partners are setup accurately.**

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
							(ID) for each contract account generated.	
	Tariff Selection / Assignment							
1.05	Tariffs for new premise accounts are assigned by Inergi's client when completing a Set Meter Order. CCC (Customer Contact Center) / BCC (Business Customer Center) agents assign a tariff to a Business Partner (Contract account) at the time of the set up for Move-in / Move-out Business Partner based on the existing premise and the expected Business Partner's contract type.	Valuation / Allocation, Existence / Occurrence	Accuracy	Revenue, Accounts Receivable	Manual	Event Driven	Inspected a sample of set-up Move-in / Move-out Business Partner accounts to determine whether tariff information has been appropriately set up in SAP based on the existing premise and the expected Business Partner's contract type. Inquired of Application Support personnel to determine whether tariffs for new premise accounts are assigned by Inergi's client when completing a Set Meter Order and whether the CCC/BCC agents assigns a tariff to a Business Partner contract account at the time of the set up for Move-in / Move-out Business Partners based on the tariff on	No exceptions noted.

Control Objective 1:
Controls provide reasonable assurance that authorized Business Partners are setup accurately.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
							the existing premise, and Business Partner's expected contract type.	
1.06	Premises rate changes from Seasonal to Residential are made by CCC/ BCC agents based on the following criteria: For a Business Partner requested premises rate change (i.e. Rural Rate Protection Credit) from Seasonal to Residential, the Business Partner must complete, sign and return a completed form (Declaration to Apply for Year Round Rate Status). For a new/ move-in Business Partner purchasing a seasonal premises that will be their year round residence, the rate is set up on request of the new/ move-in Business Partner and a form is not required. The CCC/BCC agent verifies that all criteria are met before making the premises rate change.	Valuation / Allocation, Existence / Occurrence	Accuracy, Validity	Revenue, Accounts Receivable	Manual	Event Driven	Inspected a sample of account premises with a tariff change from Seasonal to Residential to determine whether the tariff changes have been appropriately made. Inquired of BCC personnel to determine whether tariff changes from Seasonal to Residential are based on forms provided by the Business Partner or on request from Business Partners in the case of new/ move-in Business Partners, and whether the CCC/BCC agent verifies that all criteria are met before making the tariff change.	No exceptions noted.
1.07	An annual review of non-interval customer tariff appropriateness against set parameters on all accounts	Valuation / Allocation,	Accuracy, Validity	Revenue, Accounts Receivable	Manual	Annually	Inspected evidence of the annual review of non-interval customer	Exemption noted. Inergi is temporarily exempted from the

Control Objective 1: Controls provide reasonable assurance that authorized Business Partners are setup accurately.								
Description of Controls								
CA #	**Control Description**	**FS Assertion**	**Control Objective**	**Account**	**Control Type**	**Frequency**	**Testing of Operating Effectiveness**	**Results of Testing**
	usage is performed by the CCC/BCC.	Existence / Occurrence					tariff appropriateness. In addition, for a sample of accounts with a demand change inspected evidence to determine whether changes have been made in accordance with set parameters and are processed in SAP based on instructions from Inergi's client. Inquired of BCC personnel to determine whether the review of non-interval customer tariff appropriateness against set parameters on all accounts usage is performed by the CCC/BCC in an annual basis.	requirement to comply with this control until further instruction from Inergi's client.
	Credit Extension							
1.08	SAP automatically suggests a deposit amount based on the contract type and the Business Partner's Good Payment History (GPH). SAP automatically bills the Contract Account of a Business Partner for the	Valuation / Allocation	Accuracy	Deposit / Accounts Receivable	Automated / Manual	Event Driven	Inspected a sample of new Business Partner accounts to determine whether the deposit amounts have been appropriately	Exemption noted. Inergi is temporarily exempted from the requirement to comply with this control until further

Control Objective 1:
Controls provide reasonable assurance that authorized Business Partners are setup accurately.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
	initial deposit on the first bill. The deposit is waived for all LDCs, Generators, Retailers, Low Income Business Partners and RCB's. A deposit is levied on new residential Business Partners.						calculated and applied to the Business Partner accounts based on the customer's payment history and is waived for all LDCs, Generators, Retailers, Low Income Business Partners and RCBs. Inquired of Application Support personnel to determine whether the SAP system automatically bills the Business Partner for the initial deposit on the Business Partner's first bill. The deposit is waived for all LDCs, Generators, Retailers, Low Income Business Partners and RCB's. A deposit is levied on new residential Business Partners.	instruction from Inergi's client
1.09	On a monthly basis Inergi initiates the batch job to identify Residential accounts with Security Deposits that are eligible for refunds.	Valuation / Allocation	Accuracy, Validity	Deposit / Accounts Receivable	Manual	Monthly	Inspected a sample of Residential accounts with security Deposits that are eligible for refunds to determine	No exceptions noted.

Control Objective 1: **Controls provide reasonable assurance that authorized Business Partners are setup accurately.**								
Description of Controls								
CA #	**Control Description**	**FS Assertion**	**Control Objective**	**Account**	**Control Type**	**Frequency**	**Testing of Operating Effectiveness**	**Results of Testing**
	The identified amounts are approved by Inergi's client prior to processing by Inergi.						whether they were approved by Inergi's client prior to processing by Inergi. Inquired of Application Support personnel to determine whether the batch job to identify Residential accounts with Security Deposits that are eligible for refunds is run monthly and identified amounts are approved by Inergi's client prior to processing by Inergi.	
1.10	A Business Partner Deposit Account analysis is prepared monthly by a member of the Accounts Analysis Group, and approved by appropriate independent Inergi personnel as indicated in the Account Control Listing from Inergi's client. The analysis is provided to Inergi's client for their review and approval.	Completeness, Valuation / Allocation, Existence / Occurrence	Completeness, Accuracy, Validity	Deposit / Accounts Receivable	Manual	Monthly	Inspected a sample of monthly Business Partner Deposit Account analysis reports to determine whether any discrepancies or unexplained items have been investigated and followed up, the analysis reports have been reviewed/approved by an appropriate	No exceptions noted.

Control Objective 1: Controls provide reasonable assurance that authorized Business Partners are setup accurately.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
							independent Inergi personnel as indicated in the Account Control Listing from Inergi's client, and that the reports have been sent to Inergi's client for their review and approval. Inquired of Financial Service personnel to determine whether a Business Partner Deposit Account analysis is prepared monthly by a member of the Accounts Analysis Group, (to analyse Business Partner deposit balances between the subledger and GL) and is reviewed/approved by appropriate independent Inergi personnel as indicated in the Account Control Listing from Inergi's client, and that these analyses are provided to Inergi's client for	

Control Objective 1: **Controls provide reasonable assurance that authorized Business Partners are setup accurately.**

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
							their review and approval.	
Business Partners with Interval Meters								
	Interval Account LDC / Retail Generator							
1.11	Retail Settlements (RS) agent updates the technical portion of Interval Metered contract account information in SAP based on the master data template received from Inergi's client. The RS Lead agent verifies the information updated in SAP by comparing the entry in SAP with the information on the master data template. Effective May 1, 2015, Inergi's client is responsible for the technical portion of Interval Metered accounts in SAP.	Completeness, Existence / Occurrence	Completeness, Validity	Revenue, Accounts Receivable	Manual	Event Driven	Inspected a sample of new Interval Metered contract accounts to determine whether the technical portion of the accounts have been appropriately updated in SAP by the RS agent based on the master data template received from Inergi's client, and that the RS Lead agent verified this information update. Inquired of Retail Settlements personnel to determine whether Retail Settlements (RS) agent updates the technical portion of Interval Metered contract account information in SAP based on the master data template received	No exceptions noted.

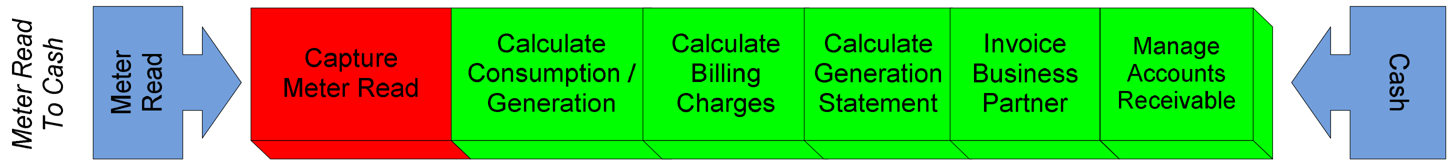
Control Objective 1:
Controls provide reasonable assurance that authorized Business Partners are setup accurately.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
							from Inergi's client, and that the RS Lead agent verifies the information updated in SAP by comparing the entry in SAP with the information on the master data template. Effective May 1, 2015, this test procedure is no longer applicable.	
Application Controls								
1.12	On a periodic basis Inergi staff access to Business Partner information and Classification, as provided by the roles, are reviewed for appropriateness by Inergi management, based on data provided by Inergi's client.	Completeness, Valuation / Allocation, Existence / Occurrence	Restricted Access	Revenue, Accounts Receivable	Manual	Quarterly	Inspected the supporting documentation for a sample of access reviews relating to access to Business Partner information and Classification within SAP, to determine whether the periodic review was performed for Inergi staff, and that staff access identified as being inappropriate was resolved.	No exceptions noted.

Control Objective 1: **Controls provide reasonable assurance that authorized Business Partners are setup accurately.**								
Description of Controls								
CA #	**Control Description**	**FS Assertion**	**Control Objective**	**Account**	**Control Type**	**Frequency**	**Testing of Operating Effectiveness**	**Results of Testing**
							Inquired of Inergi management to determine whether access to Business Partner information and Classification within SAP for Inergi staff is reviewed on a periodic basis by Inergi management.	

Meter Read to Cash



In scope of Report

Out of scope of Report (Client Retained Procedures)

	Control Objective	Completeness	Accuracy	Validity	Restricted Access
Transaction	2) Consumption Data Transfer	✓	✓	✓	✓
	3) Usage Calculation	✓	✓	✓	*
	4) Billing Charges / Invoice	✓	✓	✓	✓
	5) Retailer Settlements	✓	✓	✓	✓
	6) Other Settlements	✓	✓	✓	✓
	7) Business Partner Payment	✓	✓	✓	✓
	8) Aged Business Partner Accounts	✓	✓	✓	**

<u>Control Objectives</u>

- Completeness: All transactions that occurred are entered and accepted for processing
- Accuracy: Transactions are recorded at the correct amount, in the appropriate account, on a timely basis (in the proper period)
- Validity: All recorded transactions actually occurred (are real), relate to the organization, and were approved by designated personnel
- Restricted Access: Transaction processing and data is protected against unauthorized amendments, its confidentiality and physical assets are protected

* – Restricted access does not apply to the usage calculation process as it is all automated, and the restricted access around billing, invoices and Business Partner payments is addressed in Control Objectives 4 and 7.

** – Restricted access around Business Partner accounts is addressed in Control Objective 1 and the restricted access around billing, invoices and Business Partner payments is addressed in Control Objectives 4 and 7.

Control Objective 2: **Controls provide reasonable assurance that authorized consumption data received from Inergi's client is completely and accurately transferred and updated into systems.**								
Description of Controls								
CA #	**Control Description**	**FS Assertion**	**Control Objective**	**Account**	**Control Type**	**Frequency**	**Testing of Operating Effectiveness**	**Results of Testing**
Non-Interval								
2.01	Contracts with meter readings flagged as 'Implausible Reads', based on validation by SAP, will be not be billed.	Valuation / Allocation, Accuracy	Accuracy, Validity	Revenue, Accounts Receivable	Automated	Daily	Inspected a sample of "Implausible Read" exceptions based on validation by SAP to determine that these exceptions prevented billing. Inquired of Support Desk personnel to determine that meter readings are automatically validated by SAP, and any exceptions due to 'Implausible Reads' based on validation by SAP prevent billing.	No exceptions noted.
2.02	Implausible Reads exceptions flagged by the MTCCA application due to meter reading validation checks are resolved by the CCC.	Valuation / Allocation, Existence / Occurrence	Accuracy, Validity	Revenue, Accounts Receivable	Manual	Event Driven	From the population of exceptions handled by the CCC, inspected a sample of Implausible Reads exceptions flagged by the MTCCA application, to determine whether they were directed to a group queue, prioritized, and that	Exceptions noted.

Control Objective 2:   **Controls provide reasonable assurance that authorized consumption data received from Inergi's client is completely and accurately transferred and updated into systems.**

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
							actions have been taken by the CCC to address these exceptions. Inquired of Support Desk personnel to determine whether Implausible Reads exceptions are flagged by the MTCCA application due to meter reading validation checks, and to determine whether these exceptions are directed to a group queue, prioritized, monitored, and that actions are taken by the CCC to address these exceptions.	
2.03	On a periodic basis Inergi staff access to Exception Handling, as provided by the roles, are reviewed for appropriateness by Inergi management, based on data provided by Inergi's client.	Completeness, Valuation / Allocation, Existence / Occurrence, Rights / Obligations	Restricted Access	Revenue, Accounts Receivable	Manual	Quarterly	Inspected the supporting documentation for a sample of access reviews relating to Exception Handling within SAP, to determine whether the periodic review was performed for Inergi	No exceptions noted.

Control Objective 2:
Controls provide reasonable assurance that authorized consumption data received from Inergi's client is completely and accurately transferred and updated into systems.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
							staff, and that staff access identified as being inappropriate was resolved. Inquired of Inergi management to determine whether access to Exception Handling within SAP for Inergi staff is reviewed on a periodic basis by Inergi management.	
2.04	On a periodic basis Inergi staff access to modify meter data, as provided by the roles, are reviewed for appropriateness by Inergi management, based on data provided by Inergi's client.	Completeness, Valuation / Allocation, Existence / Occurrence, Rights / Obligations	Restricted Access	Revenue, Accounts Receivable	Manual	Quarterly	Inspected the supporting documentation for a sample of access reviews relating to modify meter data within SAP, to determine whether the periodic review was performed for Inergi staff, and that staff access identified as being inappropriate was resolved. Inquired of Inergi management to	No exceptions noted.

Control Objective 2:
Controls provide reasonable assurance that authorized consumption data received from Inergi's client is completely and accurately transferred and updated into systems.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
							determine whether access to modify meter data within SAP for Inergi staff is reviewed on a periodic basis by Inergi management.	
Interval								
2.05	Meter data exceptions flagged as billing outsorts in SAP due to meter data validation checks are monitored and resolved on a daily basis by the RS Team.	Completeness	Completeness	Revenue, Accounts Receivable	Manual	Daily	From the population of exceptions handled by the Retail Settlements team, inspected a sample of meter data exceptions flagged by SAP, to determine whether they were monitored and that actions have been taken by the RS team to address these exceptions. Inquired of Retail Settlements personnel to determine whether meter data exceptions are flagged by SAP due to meter data validation checks, and to determine whether these are monitored	No exceptions noted.

Control Objective 2:
Controls provide reasonable assurance that authorized consumption data received from Inergi's client is completely and accurately transferred and updated into systems.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
							and resolved on a daily basis by the RS Team.	
2.06	Contracts with meter data exceptions flagged by SAP due to meter reading validation checks will not be billed.	Accuracy, Valuation / Allocation	Accuracy, Validity	Revenue, Accounts Receivable	Automated	Event Driven	Inspected a sample of meter data exceptions flagged due to meter reading validation checks to determine that these exceptions prevented billing. Inquired of Retail Settlements personnel to determine that meter data exceptions prevent billing.	No exceptions noted.
2.07	For the period through to November 30, 2015, for TOU accounts, on receipt of revised consumption data from MDM/R, SAP automatically updates the old consumption data with the revised consumption data. For Non Retailer-enrolled Contract Accounts, on receipt of revised consumption from MDM/R 2 days before the contracts billing window, SAP updates the consumption data on contracts and generates a revised bill at the next billing cycle.	Completeness, Valuation / Allocation	Completeness, Accuracy, Validity	Revenue, Accounts Receivable	Automated	Event Driven	For the period through to November 30, 2015, inspected a sample of transactions for TOU account, Non Retailer-enrolled accounts and Retailer-enrolled accounts, to determine whether SAP automatically updates consumption data according to the billing window time frame, when revised consumption data was	No exceptions noted.

Control Objective 2:
Controls provide reasonable assurance that authorized consumption data received from Inergi's client is completely and accurately transferred and updated into systems.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
	For Retailer-enrolled Contract Accounts, on receipt of revised consumption data from MDM/R 2 days before the contracts billing window, SAP automatically generates a consumption cancelation to the Retailer and generates a revised bill at the next billing cycle. Effective December 1, 2015, for TOU accounts, on receipt of revised consumption data from MDM/R, SAP automatically updates the old consumption data with the revised consumption data. For Retailer-enrolled contract accounts and Non Retailer-Enrolled contract accounts, on receipt of revised consumption from MDM/R after day 8 of the contracts billing window, SAP updates the consumption data on contracts and generates a revised bill at the next billing cycle, for both.						received from MDM/R and that the revised consumption data was reflected in SAP, and the revised consumption data was used to generate a revised bill. Inquired of Application Support personnel to determine whether SAP automatically updates consumption data for TOU accounts, Non Retailer-enrolled accounts, and Retailer-enrolled accounts, according to the billing window time frame, when revised consumption data is received from MDM/R and that the revised consumption data is reflected in SAP, and the revised consumption data is used to generate a revised bill.	

Control Objective 2: **Controls provide reasonable assurance that authorized consumption data received from Inergi's client is completely and accurately transferred and updated into systems.**								
Description of Controls								
CA #	**Control Description**	**FS Assertion**	**Control Objective**	**Account**	**Control Type**	**Frequency**	**Testing of Operating Effectiveness**	**Results of Testing**
							Effective December 1, 2015, inspected a sample of transactions including TOU accounts, Retailer-enrolled accounts and Non Retailer-enrolled accounts, to determine whether SAP automatically updates consumption data according to the billing window time frame when revised consumption data is received from MDM/R and that the revised consumption data was reflected in SAP, and was used to generate a revised bill at the next billing cycle. Inquired of Application Support personnel to determine whether SAP automatically updates consumption data for TOU accounts,	

Control Objective 2: **Controls provide reasonable assurance that authorized consumption data received from Inergi's client is completely and accurately transferred and updated into systems.**

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
							Retailer-Enrolled accounts, and Non Retailer-Enrolled accounts, according to the billing window time frame when revised consumption data is received from MDM/R and that the revised consumption data is reflected in SAP, and is used to generate a revised bill at the next billing cycle.	

Exceptions Noted:

2.02 - For one of the 97 Implausible Read exceptions sampled, the exception was erroneously resolved by CCC staff.

Management has also brought to our attention an additional instance whereby a flagged Implausible Read exception was erroneously resolved by CCC staff.

Control Objective 3:
Controls provide reasonable assurance that authorized Business Partner usage is calculated completely and accurately.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
Non-Interval								
3.01	For non TOU non-interval accounts where an actual meter read is available, the consumption usage is automatically calculated using the current meter read. For TOU accounts non-interval, SAP calculates the consumption usage amount based on consumption data in SAP, and the adjustments based on the constant loss factor.	Accuracy, Valuation / Allocation	Accuracy	Revenue, Accounts Receivable	Automated	Multiple Times a Day	Reperformed for a sample of non-interval non TOU accounts to determine whether the consumption has been properly calculated. Reperformed for a sample of non-interval TOU accounts to determine whether SAP calculates the consumption usage based on the consumption data in SAP and the adjustments based on the constant loss factor. Inquired of Application Support personnel to determine whether consumption usage is automatically calculated using the current meter read where an actual meter read is available for a non TOU account and whether SAP	No exceptions noted.

Control Objective 3: **Controls provide reasonable assurance that authorized Business Partner usage is calculated completely and accurately.**

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
							calculates consumption usage based on consumption data in SAP and the adjustments based on the constant loss factor for a non TOU account.	
3.02	For all non-interval accounts in SAP, where an actual meter read is not available, consumption is estimated based on previous billing data in the following order of availability: • Base Period – when history of previous billing data is available for a period of 1 year or more. • Previous Period – when history of previous billing data is available for a period of less than 1 year. • Period Consumption – when no previous meter reading history is available.	Completeness, Valuation / Allocation	Completeness, Accuracy	Revenue, Accounts Receivable	Automated	Multiple Times a Day	Reperformed for a sample of non-interval contract accounts for which actual meter reads are not available and consumptions have been estimated to determine whether the estimation has been properly calculated. Inquired of Application Support personnel to determine whether estimation for non-interval contract accounts is calculated based on previous billing data in a following order of availability: • Based Period – when history of previous billing data is available	No exceptions noted.

Control Objective 3: Controls provide reasonable assurance that authorized Business Partner usage is calculated completely and accurately.								
Description of Controls								
CA #	**Control Description**	**FS Assertion**	**Control Objective**	**Account**	**Control Type**	**Frequency**	**Testing of Operating Effectiveness**	**Results of Testing**
							for a period of 1 year or more. • Previous Period – when history of previous billing data is available for a period of less than 1 year. • Period Consumption – when no previous meter reading history is available.	
Interbal								
3.03	For non TOU interval accounts the consumption usage is automatically calculated using the meter data in SAP.	Accuracy, Valuation / Allocation	Accuracy	Revenue, Accounts Receivable	Automated	Multiple Times a Day	Reperformed for a sample of interval non TOU accounts to determine whether the consumption has been properly calculated. Inquired of Application Support personnel to determine whether consumption usage is automatically calculated using the current meter data in SAP.	No exceptions noted.

Control Objective 4:
Controls provide reasonable assurance that authorized Business Partner billing charges are calculated and invoiced completely and accurately.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
ENERGY BILLING: Non-Interval								
	Common							
4.01	SAP initiates meter reading/billing for Business Partners in a bill group (associated with the Business Partner during enrollment) who are read according to a published Meter Reading Schedule. For Business Partners who are enrolled with a Retailer or who are Spot Business Partners, the billing is completed 11 to13 days after the reading is calculated, taken, or estimated, unless exceptions occur. For other Business Partners, billing is completed on receipt of reading unless exceptions occur.	Existence / Occurrence	Accuracy, Validity	Revenue, Accounts Receivable	Automated	Daily	Inspected a sample of Business Partner accounts (which included Business Partners enrolled with a Retailer, Spot Business Partners and other Business Partners) to determine whether they were billed according to their associated bill group, which is based on meter reading/ billing read according to a published Meter Reading Schedule. Inquired of Application Support personnel to determine whether SAP initiates meter reading/billing for Business Partners in a bill group (associated with the Business Partner during enrollment)	No exceptions noted.

Control Objective 4: **Controls provide reasonable assurance that authorized Business Partner billing charges are calculated and invoiced completely and accurately.**

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
							who are read according to a published Meter Reading Schedule. For Business Partners who are enrolled with a Retailer or who are Spot Business Partners, billing is completed 11 to13 days after the reading is calculated, taken, or estimated, unless exceptions occur. For other Business Partners, billing is completed on receipt of reading unless exceptions occur.	
4.02	SAP automatically bills Business Partners according to the billing cycle. The usage charges, including Retailer Charges for Distributor Consolidated Billing (DCB), is calculated based on consumption (either actual or estimated) and the rates associated with the Business Partner contract account in the rate table.	Completeness, Valuation / Allocation, Existence / Occurrence	Completeness, Accuracy, Validity	Revenue, Accounts Receivable	Automated	Daily	Reperformed a sample of non-interval Business Partner bills to determine whether charges were accurately calculated based on consumption and applicable rates associated with the Business Partner contract account in the rate table.	No exceptions noted.

Control Objective 4:
Controls provide reasonable assurance that authorized Business Partner billing charges are calculated and invoiced completely and accurately.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
							Inquired of Application Support personnel to determine whether SAP automatically bills Business Partners according to the billing cycle and the usage charges, calculated based on consumption and the rates associated with the Business Partner contract account in the rate table.	
4.03	SAP applies the non-competitive rates that apply to a Business Partner contract account.	Completeness, Valuation / Allocation, Existence / Occurrence	Completeness, Accuracy, Validity	Revenue, Accounts Receivable	Automated	Daily	Inspected a sample of non-interval Business Partner bills to determine whether the non-competitive rates have been applied to the Business Partner contract account bill. Inquired of Application Support personnel to determine whether SAP determines the non-competitive rates that apply to a Business	No exceptions noted.

Control Objective 4:
Controls provide reasonable assurance that authorized Business Partner billing charges are calculated and invoiced completely and accurately.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
							Partner contract account.	
4.04	On a daily basis, a Bill Check is performed by the System Technician from the Business Support group by randomly selecting a sample of bills from SAP. These bills are reviewed for accuracy by the System Technicians. Any issues are reported to the appropriate group for analysis / resolution.	Valuation / Allocation	Accuracy	Revenue, Accounts Receivable	Manual	Daily	Inspected a sample of bill performed to determine whether there was evidence of review and whether any issues have been reported to the appropriate group for analysis/ resolution. Inquired of Business Support Group personnel to determine whether Bill Check is performed by the system technician by randomly selecting a sample of bills from SAP and are reviewed for accuracy and issues, if any, are reported to the appropriate group for analysis / resolution.	No exceptions noted.
4.05	Billing and invoice outsorts flagged by the MTCCA application due to validation checks are resolved daily by BCC/CCC staff.	Valuation / Allocation, Existence / Occurrence	Accuracy, Validity	Revenue, Accounts Receivable	Manual	Daily	From the population of outsorts handled by BCC/ CCC staff, inspected a sample of billing and invoicing	Exceptions noted.

Control Objective 4: Controls provide reasonable assurance that authorized Business Partner billing charges are calculated and invoiced completely and accurately.								
Description of Controls								
CA #	**Control Description**	**FS Assertion**	**Control Objective**	**Account**	**Control Type**	**Frequency**	**Testing of Operating Effectiveness**	**Results of Testing**
							outsorts flagged by the MTCCA application due to bills or invoices generated outside defined parameters, to determine whether they were resolved daily by the BCC/CCC staff. Inquired of BCC personnel to determine whether billing and invoicing outsorts are flagged by the MTCCA application due to bills or invoices generated outside defined parameters, and to determine whether these outsorts are resolved daily by the BCC/CCC staff.	
4.06	Contracts with billing or invoice outsorts flagged by SAP will not be billed.	Accuracy, Valuation / Allocation	Accuracy, Validity	Revenue, Accounts Receivable	Automated	Event Driven	Inspected a sample of billing or invoice outsorts due to SAP validation checks to determine that these outsorts prevented billing.	No exceptions noted.

Control Objective 4:
Controls provide reasonable assurance that authorized Business Partner billing charges are calculated and invoiced completely and accurately.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
							Inquired of BCC personnel to determine that billing or invoicing outsorts prevent billing.	
4.07	After bill creation, SAP posts invoice information to the General Ledger (GL) and Accounts Receivable Sub-ledger within SAP.	Valuation / Allocation, Existence / Occurrence	Accuracy, Validity	Revenue, Accounts Receivable	Automated	Daily	Inspected a sample of bills to determine whether they were properly posted in the SAP Accounts Receivable Sub-ledger and the General Ledger. Inquired of Accounts Receivable personnel to determine whether SAP posts invoice information to the General Ledger (GL) and Accounts Receivable Sub-ledger, after bill creation.	No exceptions noted.
	Miscellaneous Charges							
4.08	SAP automatically checks Business Partner contract account records to determine and apply: • any applicable outstanding balance; • late charges; and/or	Completeness, Valuation / Allocation, Existence / Occurrence	Completeness, Accuracy, Validity	Revenue, Accounts Receivable	Automated	Event Driven	Inspected a sample of contract accounts with outstanding charges to determine whether the appropriate charges have been included in the bill.	No exceptions noted.

Control Objective 4:
Controls provide reasonable assurance that authorized Business Partner billing charges are calculated and invoiced completely and accurately.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
	• NSF fee to accounts with NSF cheques.						Inquired of BCC personnel to determine whether SAP automatically checks contract account records to determine and apply: • any applicable outstanding balance; • late charges; and/or • NSF fee to accounts with NSF cheques.	
4.09	The SAP system applies incoming invoice payments to the respective Contract Accounts.	Valuation / Allocation	Accuracy, Validity	Revenue, Accounts Receivable	Automated	Event Driven	Inspected a sample of payment received to determine whether the payment had been automatically applied in SAP to the respective Contract Account. Inquired of Inergi Corporate Finance personnel to determine whether SAP applies cash received for invoice payments to	No exceptions noted.

Control Objective 4: Controls provide reasonable assurance that authorized Business Partner billing charges are calculated and invoiced completely and accurately.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
							the respective Contract Accounts.	
Energy billing: Interval								
	Common							
4.10	On a periodic basis Inergi staff access to SAP Account Billings, as provided by the roles, are reviewed for appropriateness by Inergi management, based on data provided by Inergi's client.	Completeness, Valuation / Allocation, Existence / Occurrence	Restricted Access	Revenue, Accounts Receivable	Manual	Quarterly	Inspected the supporting documentation for a sample of access reviews relating to SAP Account Billing within SAP to determine whether the periodic review was performed for Inergi staff, and that staff access identified as being inappropriate was resolved. Inquired of Inergi management to determine whether access to SAP Account Billing within SAP for Inergi staff is reviewed on a periodic basis by Inergi management.	No exceptions noted.

Control Objective 4:
Controls provide reasonable assurance that authorized Business Partner billing charges are calculated and invoiced completely and accurately.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
4.11	Billing documents are generated for Interval Meter Business Partners in SAP according to the Meter Reading Unit (MRU) schedule stored in SAP.	Existence / Occurrence	Accuracy, Validity	Revenue, Accounts Receivable	Automated	Daily	Inspected a sample of Interval Meter accounts to determine whether billing documents were generated according to the MRU schedule stored in SAP. Inquired of Retail Settlements personnel to determine whether the billing document for Interval Meter Business Partners were generated according to the MRU schedule stored in SAP.	No exceptions noted.
4.12	Billing charges, including the Retailer Charges for Distributor Consolidated Billing (DCB), are automatically calculated by SAP using the meter read data obtained from the contract profile and rates in the rate tables associated with the Contract.	Valuation / Allocation	Accuracy	Revenue, Accounts Receivable	Automated	Daily	Inspected a sample of Interval Metered Business Partner accounts with billing information that was automatically generated in SAP and re-performed the bill calculations to determine whether the billing charges have been accurately calculated based on meter read data	No exceptions noted.

Control Objective 4: **Controls provide reasonable assurance that authorized Business Partner billing charges are calculated and invoiced completely and accurately.**

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
							obtained from the contract profile and rates defined in rate tables associated with the Contract. Inquired of BCC personnel to determine whether the billing charges, including the Retailer Charges for Distributor Consolidated Billing (DCB), are automatically calculated by SAP using the meter read data obtained from the contract profile and rates defined in rate tables associated with the Contract.	
4.13	Billing and invoice outsorts flagged by SAP due to bill validation checks are monitored and resolved on a daily basis by the RS Team.	Completeness, Valuation / Allocation, Existence / Occurrence	Completeness, Accuracy, Validity	Revenue, Accounts Receivable	Manual	Daily	From the population of outsorts handled by the Retail Settlements team, inspected a sample of billing and invoicing outsorts flagged by SAP due to validation checks, to determine whether they were monitored	No exceptions noted

Control Objective 4: **Controls provide reasonable assurance that authorized Business Partner billing charges are calculated and invoiced completely and accurately.**

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
							and resolved daily by the RS Team. Inquired of Retail Settlements personnel to determine whether billing and invoice outsorts are flagged by SAP due to validation checks, and to determine whether these outsorts are monitored and resolved on a daily basis by the RS Team.	
4.14	Contracts with billing or invoice outsorts flagged, by SAP, will be not be billed.	Completenes s	Completeness	Revenue, Accounts Receivable	Automated	Event Driven	Inspected a sample of billing or invoice outsorts due to SAP validation checks to determine that these outsorts prevented billing. Inquired of Retail Settlements personnel to determine that billing and invoicing outsorts prevent billing.	No exceptions noted.
	Interval Billing Adjustments							

Control Objective 4:
Controls provide reasonable assurance that authorized Business Partner billing charges are calculated and invoiced completely and accurately.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
4.15	Retail Settlements staff calculates billing adjustments for interval metered accounts. The adjustment is approved by the Settlements Agents Lead.	Valuation / Allocation, Existence / Occurrence	Accuracy, Validity	Revenue, Accounts Receivable	Manual	Event Driven	Inspected the supporting documentation for a sample of billing adjustments to determine whether they have been appropriately reviewed and approved by the Settlements Agents Lead. Inquired of Retail Settlement personnel to determine whether the Retail Settlements staff calculates billing adjustments and the adjustments are approved by the Settlements Agents Lead.	No exceptions noted.
4.16	The reports which identify all manual interventions to Complex Billing Contracts in SAP (Manual Adjustments by Employee Report, Manual Adjustments by Complex Contracts Report which includes Bill 100/RESOP Adjustments) are run monthly and reviewed by the Team Lead – Retail Settlements to verify	Existence / Occurrence	Validity	Revenue, Accounts Receivable	Manual	Monthly	Inspected a sample of reports identifying manual interventions to Complex Billing Contracts (Manual Adjustments by Employee Report, Manual Adjustments by Complex Contracts Report which includes	No exceptions noted.

Control Objective 4:
Controls provide reasonable assurance that authorized Business Partner billing charges are calculated and invoiced completely and accurately.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
	that adjustments entered by Inergi were authorized.						Bill 100/RESOP Adjustments) to determine whether adjustments entered by Inergi were reviewed and authorized. Inquired of Retail Settlement personnel to determine whether the, Manual Adjustments by Employee Report, and Manual Adjustments by Complex Contracts Report are run monthly and reviewed by the Team Lead – Retail Settlements to verify that adjustments entered by Inergi were authorized.	
Energy Billing:Common to Non-Interval and Interval								
	Billing Adjustments							
4.17	On a periodic basis Inergi staff access to enter Billing Adjustments related to energy accounts in SAP, as provided by the roles, are reviewed for appropriateness by Inergi management, based on data provided by Inergi's client.	Completeness, Valuation / Allocation, Existence / Occurrence	Restricted Access	Revenue, Accounts Receivable	Manual	Quarterly	Inspected the supporting documentation for a sample of access reviews relating to enter Billing Adjustments related to	No exceptions noted.

Control Objective 4:
Controls provide reasonable assurance that authorized Business Partner billing charges are calculated and invoiced completely and accurately.

Description of Controls								
CA #	**Control Description**	**FS Assertion**	**Control Objective**	**Account**	**Control Type**	**Frequency**	**Testing of Operating Effectiveness**	**Results of Testing**
							energy account within SAP, to determine whether the periodic review was performed for Inergi staff, and that staff access identified as being inappropriate was resolved. Inquired of Inergi management to determine whether access to enter Billing Adjustments related to energy accounts within SAP for Inergi staff is reviewed on a periodic basis by Inergi management.	
	Retailer Charges for DCB - Retailer Line Items (RLI) Business Partners							
4.18	The Retailer submits to Inergi's client's systems the line item charge(s) to be put on the Business Partner's bill. All Invoice Bill Ready (IBR) line items received by the billing cut-off are transferred to SAP for billing.	Valuation / Allocation	Accuracy	Revenue, Accounts Receivable	Automated	Multiple Times a Day	Inspected a sample of IBR's received from Retailers to determine whether the line items received by the billing cut-off were billed. Inquired of Application Support or Inergi IT personnel to	No exceptions noted.

Control Objective 4:
Controls provide reasonable assurance that authorized Business Partner billing charges are calculated and invoiced completely and accurately.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
							determine whether the Retailer IBR line items received by the billing cut-off are billed.	
4.19	If the IBR transaction from the Retailer is received after the cut-off date (4 business days from the date on which usage was sent to the retailer), if there is duplication, or if a bill account is not active, the transaction is automatically rejected in SAP.	Valuation / Allocation	Accuracy	Revenue, Accounts Receivable	Automated	Event Driven	Inspected a sample of IBR transactions from Retailers to determine whether transactions received after the cut-off date, duplicate transactions or transactions received against a bill account that is not active, have been rejected. Inquired of Application Support or Inergi IT personnel to determine whether the IBR transaction from Retailers is automatically rejected if the IBR transaction is received after the cut-off date, if there is duplication, or if a bill account is not active.	No exceptions noted.
	Street Lights							

Control Objective 4:
Controls provide reasonable assurance that authorized Business Partner billing charges are calculated and invoiced completely and accurately.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
4.20	SAP calculates Street Light bills based on a Business Partner's Street Light load profile and the rates associated with the Business Partner Contract.	Valuation / Allocation, Existence / Occurrence	Accuracy, Validity	Revenue, Accounts Receivable	Automated	Daily	Reperformed a sample of Street Light accounts to determine whether billing was accurately calculated based on the Business Partner's Street Light load profile and applicable rates. Inquired of BCC personnel to determine whether SAP calculates Street Light bills based on a Business Partner's Street Light load profile and the rates associated with the Business Partner Contract.	No exceptions noted.
4.21	Daily calculation for Street Light Weight Average Hour Spot Price (Street Light WAHSP) is performed in SAP using the Hourly Street Light Load Data, as calculated by IEE, using the OEB Load Profile, and the Hourly Price Data from the IESO.	Valuation / Allocation, Existence / Occurrence	Accuracy	Revenue, Accounts Receivable	Automated	Daily	Reperformed the SAP calculation of the Street Light WAHSP in SAP, using the Hourly Street Light Load Data calculated by IEE using the OEB Load Profile and the Hourly Price Data from the IESO, to	No exceptions noted.

Control Objective 4:
Controls provide reasonable assurance that authorized Business Partner billing charges are calculated and invoiced completely and accurately.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
							determine whether the calculation is accurate. Inquired of Retail Settlement personnel to determine whether the SAP calculation for Street Light WAHSP is performed using the Hourly Street Light Load Data calculated by IEE using the OEB Load Profile and the Hourly Price Data from the IESO.	
4.22	SAP calculates the Net System Load Shape WAHSP using the Net System Load Shape (NSLS), as calculated in SAP and the Price Data from IESO.	Valuation / Allocation, Existence / Occurrence	Accuracy, Validity	Revenue, Accounts Receivable	Automated	Daily	Reperformed the SAP calculation for NSLS WAHSP using the NSLS data and the price data from the IESO to determine whether the calculation is accurate. Inquired of Retail Settlement personnel to determine whether SAP calculates the NSLS WAHSP using the NSLS and price data from IESO.	No exceptions noted.

Control Objective 4: **Controls provide reasonable assurance that authorized Business Partner billing charges are calculated and invoiced completely and accurately.**								
Description of Controls								
CA #	**Control Description**	**FS Assertion**	**Control Objective**	**Account**	**Control Type**	**Frequency**	**Testing of Operating Effectiveness**	**Results of Testing**
Non-Energy Billing AND Account Receivables								
	GL Reconciliation							
4.23	On a monthly basis, the reconciliation between the Accounts Receivable Sub-Ledger and General Ledger in SAP is prepared by a member of the Account Analysis Group. The reconciliation is approved by appropriate independent Inergi personnel as indicated in the Account Control Listing from Inergi's client.	Completeness, Valuation/ Allocation, Existence / Occurrence	Completeness, Accuracy, Validity	Revenue, Accounts Receivable	Manual	Monthly	Inspected a sample of Accounts Receivable Sub-ledger and General Ledger monthly reconciliations to determine whether they were reviewed/approved by appropriate independent Inergi personnel as indicated in the Account Control Listing from Inergi's client. Inquired of Financial Services personnel to determine whether on a monthly basis the Accounts Receivable Sub-ledger is reconciled with the General Ledger by a member of the Account Analysis Group and that the reconciliation is reviewed/approved by	No exceptions noted.

Control Objective 4: Controls provide reasonable assurance that authorized Business Partner billing charges are calculated and invoiced completely and accurately.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
							appropriate independent Inergi personnel as indicated in the Account Control Listing from Inergi's client.	
	Billing System							
4.24	On a periodic basis Inergi staff access to SAP Billing functionality relating to Business Partner master data maintenance, sales order processing and invoice processing, as provided by the roles, are reviewed for appropriateness by Inergi management, based on data provided by Inergi's client.	Completeness, Valuation/ Allocation, Existence / Occurrence, Rights and Obligations	Restricted Access	Revenue, Accounts Receivable	Manual	Quarterly	Inspected the supporting documentation for a sample of access reviews relating to SAP Billing functionality relating to Business Partner master data maintenance, sales order processing and invoice processing, to determine whether the periodic review was performed for Inergi staff, and that staff access identified as being inappropriate was resolved. Inquired of Inergi management to determine whether access to the SAP	No exceptions noted.

Control Objective 4:
Controls provide reasonable assurance that authorized Business Partner billing charges are calculated and invoiced completely and accurately.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
							Billing functionality for Inergi staff is reviewed on a periodic basis by Inergi management.	
4.25	SAP automatically matches prepayments to the relevant invoices. SAP will automatically update the AR Sub-ledger when the invoice is finalized or when a prepayment is made.	Completeness, Existence / Occurrence	Completeness, Accuracy, Validity	Revenue, Accounts Receivable	Automated	Daily	Inspected a sample of prepayment transactions to determine whether the system automatically matches prepayments to relevant invoices and that the system prevents invoices being printed for zero dollar invoices. Inspected a sample invoice and payment advice to determine whether SAP will update the AR Sub-ledger when the invoice is finalized or when a prepayment is made. Inquired of Accounts Receivable personnel to determine whether SAP automatically matches prepayments	No exceptions noted.

Control Objective 4: **Controls provide reasonable assurance that authorized Business Partner billing charges are calculated and invoiced completely and accurately.**

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
							to the relevant invoices and SAP will automatically update the AR Sub-ledger when the invoice is finalized or when a prepayment is made.	
4.26	SAP is configured to create invoices for all work orders in 'ready to bill' status and post these to the General Ledger.	Completeness, Existence / Occurrence	Completeness, Validity	Revenue, Accounts Receivable	Automated	Event Driven	Inspected a sample of invoices created in the SAP system and traced them back to the SAP work order and to the General Ledger to determine whether the system posted the amounts in the GL. Inspected a sample of work orders in 'ready to bill' status in the SAP system and traced them to the corresponding invoice generated and to the General Ledger to determine whether the system posted the amounts in the GL. Inquired of Accounts Receivable personnel to determine whether	No exceptions noted.

Control Objective 4:
Controls provide reasonable assurance that authorized Business Partner billing charges are calculated and invoiced completely and accurately.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
							the SAP system creates invoices for work orders in ‘ready to bill’ status in the SAP system and posts to General Ledger. Inquired of Accounts Receivable personnel to determine whether invoices are created automatically in SAP based on work orders and that Inergi does not create manual invoices.	
4.27	For Time & Material and Damage Claim work orders, the AR Clerk verifies information in SAP against actual or estimates provided by Inergi’s client. Unexplained variances are sent to Inergi’s client for resolution and followed up by the AR Clerk. The AR Clerk generates manual invoices based on information provided by Inergi’s client. The manual invoices are verified for accuracy of input and signed off by an independent member of the Non Energy Billing team.	Completeness, Existence / Occurrence, Valuation / Allocation	Completeness, Accuracy	Revenue, Accounts Receivable	Manual	Daily	Inspected a sample of Time & Material and Damage Claim work orders to determine whether they were verified against information provided by Inergi’s client and whether identified variances were sent to Inergi’s client for resolution. For the same sample of work orders, inspected these to determine that a manual invoice is	No exceptions noted.

Control Objective 4: **Controls provide reasonable assurance that authorized Business Partner billing charges are calculated and invoiced completely and accurately.**

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
							generated by the AR Clerk based on information provided by Inergi's client, and is verified for accuracy of input and signed off by an independent member of the Non Energy Billing team. Inquired of Accounts Receivable personnel to determine whether the AR Clerk verifies information within Time & Material and Damage Claim work orders against information provided by Inergi’s client and that identified variances are sent to Inergi’s client for resolution. A manual invoice is generated by the AR Clerk based on information provided by Inergi's client and is verified for accuracy of input by an independent member	

Control Objective 4:
Controls provide reasonable assurance that authorized Business Partner billing charges are calculated and invoiced completely and accurately.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
							of the Non Energy Billing team.	
4.28	On a daily basis, the Quality Control Clerk runs the batch job error log reports which identifies whether all sales orders without billing blocks generated invoices. The batch job log error reports are reviewed by the Quality Control Clerk and errors are followed up appropriately.	Completeness, Valuation / Allocation, Existence / Occurrence	Completeness, Accuracy, Validity	Revenue, Accounts Receivable	Manual	Daily	Inspected a sample of invoice creation batch job log error reports to determine whether they were reviewed for errors and errors were followed up appropriately by the Quality Control Clerk. Inspected a sample of invoices generated to determine whether all invoices originated from a work order or sales order. Inquired of Financial Services personnel to determine whether on a daily basis the invoice creation batch jobs are run according to schedule and that the batch job log error reports are reviewed and errors followed up appropriately by the Quality Control Clerk.	No exceptions noted.

Control Objective 4:
Controls provide reasonable assurance that authorized Business Partner billing charges are calculated and invoiced completely and accurately.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
	Recurring Bills							
4.29	For active contracts, invoices are generated according to the defined billing schedule.	Completeness, Valuation / Allocation, Existence / Occurrence	Completeness, Accuracy, Validity	Revenue, Accounts Receivable	Automated	Multiple Times a Day	For a sample of active contracts, matched the billing schedule for the period to the actual invoice generated. Inquired of AR Clerk that billing schedules are defined within the SAP contract and that SAP is configured to automatically create sales order and billing/ invoice documents according to the start and end date of the SAP defined contract.	No exceptions noted.
4.30	SAP is configured to prevent billing documents from being changed after the invoice is generated.	Existence / Occurrence	Validity	Revenue, Accounts Receivable	Automated	Event Driven	Observed Accounts Receivable personnel attempting to change/modify a sample invoice. Inquired of Accounts Receivable Clerk to determine whether invoices can be modified once generated.	No exceptions noted.

Control Objective 4:
Controls provide reasonable assurance that authorized Business Partner billing charges are calculated and invoiced completely and accurately.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
4.31	On a periodic basis Inergi staff access to maintain Business Partner contracts within SAP, as provided by the roles, are reviewed for appropriateness by Inergi management, based on data provided by Inergi's client.	Completeness, Valuation / Allocation, Existence / Occurrence, Rights / Obligations	Restricted Access	Revenue, Accounts Receivable	Manual	Quarterly	Inspected the supporting documentation for a sample of access reviews relating to maintain Business Partner contracts within SAP, to determine whether the periodic review was performed for Inergi staff, and that staff access identified as being inappropriate was resolved. Inquired of Inergi management to determine whether access to maintain Business Partner contracts within SAP for Inergi staff is reviewed on a periodic basis by Inergi management.	No exceptions noted.
	Manual Invoice Requisition Form							
	Prepayments							
4.32	Once the payment option form is approved and submitted by Inergi's	Existence / Occurrence	Validity	Revenue, Accounts Receivable	Manual	Multiple Times a Day	Inspected a sample of prepayment entries to determine whether the	No exceptions noted.

Control Objective 4:
Controls provide reasonable assurance that authorized Business Partner billing charges are calculated and invoiced completely and accurately.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
	client, prepayment information is manually entered into SAP.						payment option forms were received and approved by Inergi's client. Inquired of Accounts Receivable personnel to determine whether the information is manually entered into SAP once the payment option form is approved by Inergi's client.	
4.33	For mismatches of $15 or below between prepayments and invoices, SAP has been configured to write off these mismatches automatically.	Valuation / Allocation, Existence / Occurrence	Accuracy, Validity	Revenue, Accounts Receivable	Automated	Daily	Observed the SAP configuration to determine whether the tolerance group has been defined and specifies the variance amount. Inspected a sample invoice with a mismatch of $15 or below between the customer's prepayment amount and the invoice amount to determine whether the mismatch was	No exceptions noted.

Control Objective 4: Controls provide reasonable assurance that authorized Business Partner billing charges are calculated and invoiced completely and accurately.								
Description of Controls								
CA #	**Control Description**	**FS Assertion**	**Control Objective**	**Account**	**Control Type**	**Frequency**	**Testing of Operating Effectiveness**	**Results of Testing**
							automatically written off. Inquired of AR personnel to determine whether the SAP system has been configured to automatically write off mismatches of $15 and below.	
4.34	SAP automatically updates the Accounts Receivable Sub-ledger and General Ledger when an invoice is finalized or when the payment is processed.	Completeness, Valuation / Allocation	Completeness, Accuracy	Revenue, Accounts Receivable	Automated	Multiple Times a Day	Inspected a sample invoice that is finalized and payment that is processed to determine whether the appropriate Sub-ledger and General Ledger accounts were updated. Inquired of Financial Services personnel whether SAP fully updates the Accounts Receivable Sub-ledger and General Ledger when an invoice is finalized or when the payment is processed.	No exceptions noted.

Control Objective 4:
Controls provide reasonable assurance that authorized Business Partner billing charges are calculated and invoiced completely and accurately.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
	Late Payment Charges							
4.35	A batch job has been scheduled in SAP on the last day of the fiscal month which will apply late payment charges to Business Partner accounts with outstanding balances. A batch job log report is reviewed by a member of the Accounts Reconciliation & Asset Management team to determine that the batch job has run without error. Any errors noted are escalated to appropriate personnel for resolution.	Valuation / Allocation	Accuracy	Revenue, Accounts Receivable	Manual / Automated	Monthly	Inspected a sample of batch job log reports generated to determine whether the monthly late payment job was run and this report was reviewed by a member of the Accounts Reconciliation & Asset Management team and if any errors were noted these were escalated to appropriate personnel for resolution. Reperformed the calculation on a sample of accounts with late payment application to determine whether charges are calculated accurately by the system. Inquired of AR personnel to determine whether the batch job report generated is reviewed by a member	No exceptions noted.

Control Objective 4: Controls provide reasonable assurance that authorized Business Partner billing charges are calculated and invoiced completely and accurately.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
							of the Accounts Reconciliation & Asset Management team to determine that the Batch job, that automatically calculates late payment charges on accounts with outstanding balances, was run on the last day of the fiscal month and if any errors are noted these are escalated to appropriate personnel for resolution.	

Exceptions Noted:

4.05 - Management has brought to our attention an instance whereby a flagged Invoice Outsort was erroneously resolved by BCC/ CCC staff.

Control Objective 5: **Controls provide reasonable assurance that Business Partner billing transactions are calculated and transferred completely and accurately to the correct Retailer.**								
Description of Controls								
CA #	**Control Description**	**FS Assertion**	**Control Objective**	**Account**	**Control Type**	**Frequency**	**Testing of Operating Effectiveness**	**Results of Testing**
Retailer Enrollment								
5.01	Following a Retailer request to be set up, the BCC Coordinator, based on the Service Agreement Sheet Summary sent by Inergi's Client, will request Business Sustainment & Support (BS&S) to set up the Retailer in SAP. BS&S will set up the Retailer in SAP.	Valuation / Allocation	Accuracy, Validity	Revenue, Accounts Receivable or Expenses, Accounts Payable	Manual	Event Driven	Inspected a sample of new Retailers to determine whether a Service Agreement Sheet Summary from Inergi's client is available and that the retailer has been set up in SAP. Inquired of BCC personnel to determine whether new Retailers are set up based on a Service Agreement Sheet Summary, provided by Inergi's client; and that BS&S set up the Retailer in SAP based on the BCC Coordinators request.	No exceptions noted.
Retailer Energy Transactions								
	Distributed Consolidated Billing (DCB) and Distributed Consolidated Billing – Retailer Line Item (DCB-RLI Business Partners)							
5.02	Calculated SAP usage information for Retailer enrolled Business Partners is automatically sent to	Completeness, Existence / Occurrence	Validity	Revenue, Accounts Receivable	Automated	Daily	Inspected a sample from the population of DCB and DCB-RLI	No exceptions noted.

Control Objective 5: Controls provide reasonable assurance that Business Partner billing transactions are calculated and transferred completely and accurately to the correct Retailer.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
	the appropriate Retailer after the billing is completed. The outbound transactions are validated and stored in SAP. An Application Advice Accept or an Application Advice Reject is received from the Retailer for all Billing Transactions and Status Advices.			or Expenses, Accounts Payable			Retailer-enrolled accounts in SAP to determine whether the correct usage information was sent to the appropriate retailer, and to determine that an Application Advice Accept or Reject is received from the Retailer for the Billing Transaction and Status Advice. Inquired of BCC Settlement personnel to determine whether SAP automatically sends all usage information calculated for Retailer enrolled Business Partners to the appropriate Retailer after billing is completed, and that an Application Advice Accept or Reject is received from the Retailer for the Billing	

Control Objective 5:
Controls provide reasonable assurance that Business Partner billing transactions are calculated and transferred completely and accurately to the correct Retailer.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
							Transaction and Status Advice.	
	Retailer Consolidated Billing (RCB) Business Partners							
5.03	SAP files which contain both commodity and non-commodity information are automatically sent to the appropriate Retailer from SAP.	Completeness	Completeness	Expenses, Accounts Payable	Automated	Event Driven	Inspected a sample of RCB Business Partner accounts to determine whether both commodity and non-commodity information is automatically sent to the appropriate Retailer. Inquired of BCC personnel to determine whether SAP automatically sends both commodity and non-commodity information to the appropriate Retailer. Effective September 1, 2010, the control has not been tested due to no instances of SAP files sent.	No instances of SAP files sent during the audit period therefore could not test operating effectiveness.

Control Objective 5:
Controls provide reasonable assurance that Business Partner billing transactions are calculated and transferred completely and accurately to the correct Retailer.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
	Retailer Settlement of Energy Transactions							
5.04	SAP calculates settlement amounts for retailer accounts invoices.	Valuation / Allocation, Completeness	Completeness, Accuracy	Revenue, Accounts Receivable	Automated	Daily	Reperformed the calculation of settlement amounts for a sample of retailer accounts to determine whether the settlement amount matches with the invoice amount generated in SAP, and was calculated accurately. Inquired of BCC personnel to determine whether the settlement amounts for retailer accounts are calculated within SAP for invoice production.	No exceptions noted.
5.05	For Non-Interval Metered Business Partners, SAP calculates commodity at spot price using the WAHSP. For Interval Business Partners, SAP calculates commodity at spot price using the HOEP.	Valuation / Allocation	Accuracy	Revenue, Accounts Receivable	Automated	Daily	Reperformed the calculation of the commodity at spot price for a sample of interval and non-interval Business Partners to determine whether the values are accurately calculated by the system.	No exceptions noted.

Control Objective 5:
Controls provide reasonable assurance that Business Partner billing transactions are calculated and transferred completely and accurately to the correct Retailer.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
							Inquired of Retail Settlement personnel to determine whether SAP calculates commodity at spot price using the WAHSP for Non-Interval Metered and commodity at spot price using the HOEP for Interval Metered accounts.	
5.06	The payment posting run in SAP will only select retailer invoices which have been approved by Inergi's client.	Existence/ Occurrence	Validity	Revenue, Accounts Receivable	Automated	Daily	Inspected a sample of retailer invoices in the payment posting run to determine whether they were approved by Inergi's client. Inquired of BCC personnel to determine whether the payment posting run in SAP will only select retailer invoices which have been approved by Inergi's client.	No exceptions noted.

Control Objective 5:
Controls provide reasonable assurance that Business Partner billing transactions are calculated and transferred completely and accurately to the correct Retailer.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
5.07	Payment processing for approved debit and credit retailer bills is initiated by the BCC staff.	Completeness, Valuation / Allocation, Existence / Occurrence	Completeness, Accuracy, Validity	Revenue, Accounts Receivable	Manual	Daily	Inspected a sample of paid retailer bills to determine whether payment processing for approved debit and credit retailer bills was initiated by BCC staff. Inquired of BCC personnel to determine whether payment processing for approved debit and credit retailer bills is initiated by the BCC staff.	No exceptions noted.
5.08	Settlement invoices are posted to the relevant Sub-ledgers and General Ledger in SAP.	Allocation, Existence / Occurrence	Completeness, Accuracy	Revenue, Accounts Receivable	Automated	Event Driven	Inspected on-line a sample of settlement invoices from the SAP system to determine whether the invoices have been appropriately posted into the Sub-ledger and General Ledger. Inquired of Corporate Accounting personnel to determine whether the SAP system posts settlement invoices to	No exceptions noted.

Control Objective 5:
Controls provide reasonable assurance that Business Partner billing transactions are calculated and transferred completely and accurately to the correct Retailer.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
							the relevant Sub-ledgers and General Ledger.	
5.09	A member of the Accounts Analysis Group analyses the Retailer clearing accounts in the SAP General Ledger monthly. Discrepancies are identified and investigated. The analyses are approved by appropriate independent Inergi personnel as indicated in the Account Control Listing from Inergi's client and are provided to Inergi's client's Financial Advisor for review and approval.	Completeness, Valuation / Allocation, Existence / Occurrence	Completeness, Accuracy	Revenue, Accounts Receivable	Manual	Monthly	Inspected the supporting documentation for a sample of retailer clearing account analyses to determine whether monthly analyses were performed and discrepancies were identified and investigated, the analyses were reviewed/approved by independent Inergi personnel as indicated in the Account Control Listing from Inergi's client and whether copies of the analyses were provided to Inergi's client's Financial Advisor for review and approval. Inquired of Accounts Analysis Group personnel to determine	No exceptions noted.

Control Objective 5:
Controls provide reasonable assurance that Business Partner billing transactions are calculated and transferred completely and accurately to the correct Retailer.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
							whether a member of the Accounts Analysis Group analyses retailer clearing accounts in SAP monthly and discrepancies are identified and investigated. Further inquired whether the analyses are reviewed/approved by independent Inergi personnel as indicated in the Account Control Listing from Inergi's client and copies of the analyses are provided to Inergi's client's Financial Advisor for review and approval.	
5.10	SAP sends the Invoice Settlement Total (IST) to appropriate Retailers.	Completeness, Existence / Occurrence	Completeness, Validity	Revenue, Accounts Receivable	Automated	Daily	Inspected a sample of Retailer bills to determine whether the appropriate IST has been sent and that an acknowledgment was received from the appropriate Retailer. Inquired of BCC personnel to determine	No exceptions noted.

Control Objective 5:
Controls provide reasonable assurance that Business Partner billing transactions are calculated and transferred completely and accurately to the correct Retailer.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
							whether the IST is sent by SAP to the appropriate Retailers.	
5.11	The Retailer Group within BCC monitors retailer billing problems or issues reported by retailers and takes appropriate follow-up actions.	Completeness	Completeness	Revenue, Accounts Receivable	Manual	Event Driven	Inspected a sample of problems logged on the Numero System to determine whether they were appropriately closed. Inquired of BCC personnel to determine whether BCC monitors retailer billing problems or issues reported by retailers and takes appropriate follow-up actions.	No exceptions noted.
Retailer Transactions – monthly retailer billing (service charges)								
5.12	For every transaction that is revenue generating (i.e., enrollment request, change locations, drop request), as defined in section 12.2 of OEB Electricity Distribution Rate Handbook (Retail Service Charges), SAP calculates a monthly non-energy billing to be sent to the Retailer. These transactions are sent to the	Completeness, Existence / Occurrence	Completeness, Validity	Revenue, Accounts Receivable	Automated	Monthly	Inspected a sample of SAP transactions with the retailers to determine whether SAP calculates a monthly non-energy billing and that the transactions were sent to the Retailers via	No exceptions noted.

Control Objective 5:
Controls provide reasonable assurance that Business Partner billing transactions are calculated and transferred completely and accurately to the correct Retailer.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
	retailers via SAP (using EBT logic).						SAP (using EBT logic). Inquired of Inergi – IT personnel to determine whether SAP calculates a monthly non-energy billing and that these transactions are sent to the Retailers via SAP (using EBT logic).	

Control Objective 6:
Controls provide reasonable assurance that settlement transactions are authorized, calculated, transferred, invoiced, paid, and collected completely and accurately.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
Power Purchases								
	Power Purchases – IESO							
6.01	The Hourly Ontario Energy Price data from the IESO/ Inergi's client is automatically transferred from IEE to SAP.	Completeness, Valuation / Allocation, Existence / Occurrence	Completeness, Accuracy, Validity	Accounts Payable, Cost of Goods Sold	Automated	Daily	Inspected a sample of days to determine whether the Hourly Ontario Energy Price data was received from the IESO/ Inergi's client was successfully transferred to SAP. Inquired of Wholesale Settlements staff to determine whether SAP retrieves the Hourly Ontario Energy Price data from the IESO/ Inergi's client daily.	No exceptions noted.
6.02	Wholesale Settlements approves the Hourly Ontario Energy Price (HOEP) data in SAP, based on Preliminary Settlement Statements from IESO.	Completeness, Valuation / Allocation, Existence / Occurrence	Completeness, Accuracy, Validity	Accounts Payable, Cost of Goods Sold	Manual	Daily	Inspected a sample of daily HOEP data to determine whether Wholesale Settlement staff reviewed and approved HOEP price data in SAP based on Preliminary Settlement Statements from IESO.	No exceptions noted.

Control Objective 6:
Controls provide reasonable assurance that settlement transactions are authorized, calculated, transferred, invoiced, paid, and collected completely and accurately.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
							Inquired of Wholesale Settlements staff to determine whether the wholesale settlement staff review and approve HOEP price data in SAP, based on Preliminary Settlement Statements from IESO.	
6.03	The Settlement Analyst reviews the Daily Settlement of Preliminary Statement from SAP to compare the IESO Daily Preliminary Settlement Statement with the proxy statement based on the totalized meter data and the hourly prices downloaded from the IESO. Any discrepancies exceeding $42 for any hour for any Delivery Point are investigated. The Settlements Analyst prepares and files a Notice of Disagreement (NOD) with the IESO, as required.	Completeness, Valuation / Allocation, Existence / Occurrence	Completeness, Accuracy, Validity	Accounts Payable, Cost of Goods Sold	Manual	Daily	Inspected a sample of reviews performed to determine whether any discrepancies exceeding the $42 for any hour for any Delivery Point threshold were investigated, and whether the Settlements Analyst prepared and filed a NOD with the IESO, as required. Inquired of the Settlement staff to determine whether the Settlement Analyst reviews the Daily	No exceptions noted.

Control Objective 6: **Controls provide reasonable assurance that settlement transactions are authorized, calculated, transferred, invoiced, paid, and collected completely and accurately.**

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
							Settlement of Preliminary Statement to compare the IESO Daily Preliminary Settlement Statements with the proxy statements based on the totalized meter data and the hourly prices downloaded from the IESO. Inquired of Settlement staff to determine whether any discrepancies exceeding the $42 for any hour for any Delivery Point threshold are investigated and whether the Settlements Analyst prepares and files a NOD with the IESO, as required.	
6.04	The Wholesale Settlements staff creates the daily Market Open Status report from their review of the IESO daily preliminary statement reconciliations and	Completeness, Valuation / Allocation	Completeness, Accuracy	Accounts Payable, Cost of Goods Sold	Manual	Daily	Inspected a sample of Market Open Status Reports to determine whether the reports have been reviewed,	No exceptions noted.

Control Objective 6:
Controls provide reasonable assurance that settlement transactions are authorized, calculated, transferred, invoiced, paid, and collected completely and accurately.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
	follows up on items outstanding. A copy of this report is provided to Inergi's client.						outstanding items have been investigated and that any appropriate follow up actions were taken. Inquired of Wholesale Settlement personnel to determine whether the staff reviews the Market Open Status report and follows up on items outstanding.	
6.05	The Wholesale Settlements staff verifies the IESO invoice and sends this to AP for input into SAP, to make payment to IESO. The settlement IESO invoice payments are verified by Wholesale Settlements staff and routed to the Manager of Transmission and Distribution (T&D) Settlements or delegate at Inergi's client for payment approval in SAP.	Valuation / Allocation, Existence / Occurrence	Accuracy, Validity	Accounts Payable, Cost of Goods Sold	Manual	Monthly	Inspected a sample of settlement IESO invoice payments to determine whether the entries were verified by Wholesale Settlements staff and appropriately approved in SAP. Inquired Wholesale Settlement personnel to determine whether the staff verifies the IESO invoice and sends this to AP for input into SAP for payment. The	No exceptions noted.

Control Objective 6: Controls provide reasonable assurance that settlement transactions are authorized, calculated, transferred, invoiced, paid, and collected completely and accurately.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
							settlement IESO invoice payments are verified by Wholesale Settlements staff and routed for appropriate approval before payment is made.	
	Power Purchases – Local Distribution Companies (LDC)							
6.06	Long Term Load Transfer (LTLT) (Inbound): The Wholesale Settlements staff checks the consumption data for load transfer Business Partners received from SAP BI and sends to the Local Distribution Companies (LDC) for review and invoicing. For LDCs with special agreements with Inergi's client, the LDC prepares their own invoice and provides to Inergi. The invoices are reviewed by Wholesale Staff and submitted to the Manager of Transmission and Distribution (T&D) Settlements or delegate for approval. Wholesale staff prepares the Cheque Requisition and sends to AP for entry into SAP. Wholesale staff routes the approval to Manager of T&Ds or	Completeness, Valuation / Allocation, Existence / Occurrence	Completeness, Accuracy, Validity	Accounts Payable, Cost of Goods Sold	Manual	Event Driven	Inspected a sample of LDC invoices regarding LTLT to determine whether the appropriate verification has been completed and that the invoice amounts were appropriately approved. Inquired of Wholesale Settlement personnel to determine whether the Manager of T&D Settlements at Inergi's client approves the invoiced amount and the Director of Wholesale Settlements or his designate approves in	No exceptions noted.

Control Objective 6: **Controls provide reasonable assurance that settlement transactions are authorized, calculated, transferred, invoiced, paid, and collected completely and accurately.**

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
	delegate for payment approval in SAP.						SAP prior to actual payment and that the Manager of T&D, or designate, approves the payment in SAP.	
6.07	Long Term Load Transfer (LTLT) (Outbound): The Wholesale Settlements staff prepares a blocked sales order for release in SAP based on the approved sales order detail provided by the Manager of T&D Settlements at Inergi's client. A Wholesale Settlements staff independent of the preparer verifies the blocked sales order detail for accuracy of input, prior to releasing the sales order to automatically populate the invoice. The invoice is routed in SAP to the Manager of T&D Settlements at Inergi's client for approval to release the invoice to the LDC.	Completeness, Valuation / Allocation, Existence / Occurrence	Completeness, Accuracy, Validity	Accounts Payable, Cost of Goods Sold	Manual	Event Driven	Inspected a sample of LTLT invoices to LDCs to determine whether the appropriate verification was completed and that the sales order details provided were appropriately approved. Inspected a sample of LTLT invoices to determine whether the underlying sales orders were created and released in SAP by independent wholesale settlement staff Inquired of Wholesale Settlement personnel to determine whether the staff prepares and	No exceptions noted.

Control Objective 6:
Controls provide reasonable assurance that settlement transactions are authorized, calculated, transferred, invoiced, paid, and collected completely and accurately.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
							verifies sales order detail provided by Inergi's client's Manager of T&D Settlements, which populates the invoices for LDCs and the Manager of T&D Settlements at Inergi's client approves the sales order detail prior to the invoice being sent to the Business Partner. Inquired of Wholesale Settlement personnel to determine whether the staff prepares blocked sales orders in SAP, which is released by an independent WS staff, for automatic creation of the invoice.	
6.08	For Host LDC's the Wholesale Settlements staff verifies the billing determinants, kW and kWh, on the invoices using data from Itron Enterprise Edition (IEE) and HOEP data from IESO.	Valuation / Allocation, Existence / Occurrence	Accuracy, Validity	Accounts Payable, Cost of Goods Sold	Manual	Event Driven	Inspected a sample of invoices to Host LDC's to determine whether the payable amounts in SAP were appropriately	No exceptions noted.

Control Objective 6:
Controls provide reasonable assurance that settlement transactions are authorized, calculated, transferred, invoiced, paid, and collected completely and accurately.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
	A proxy invoice is created and used to verify charges, as well. The payable amounts are input into SAP AP by Inergi Account Payable based on monthly invoices from the LDC. The SAP AP approval request is then routed to Manager of Transmission and Distribution (T&D) Settlements or delegate at Inergi's client for payment approval in SAP.						reviewed, and whether the SAP approval request was routed to the Manager Transmission and Distribution (T&D) Settlement's or delegate at Inergi's client for approval. Inquired of Wholesale Settlements personnel to determine whether the staff verifies the billing determinants, kW and kWh, on the invoices to Host LDC's using data from Itron Enterprise Edition (IEE) and HOEP data from IESOA proxy invoice is created and used to verify charges, as well. Inquired of Wholesale Settlements personnel to determine whether the payable amounts are input into SAP AP	

Control Objective 6:
Controls provide reasonable assurance that settlement transactions are authorized, calculated, transferred, invoiced, paid, and collected completely and accurately.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
							by Inergi Account Payable based on monthly invoices from the LDC and whether the SAP AP approval request is then routed to Manager of Transmission and Distribution (T&D) Settlements or delegate at Inergi's client for payment approval in SAP.	
6.09	For Short Term Load Transfer's (STLT) (Inbound) the Wholesale Settlements staff verifies the Load Transfer event and the charges on the inbound invoices. The invoices are submitted to the Manager Transmission and Distribution (T&D) Settlements or delegate at Inergi's client for approval. The payable amounts are input by Inergi Account Payable into SAP based on approved invoices received from Wholesale Settlement. The SAP approval request is then routed to Manager of Transmission and Distribution (T&D) Settlements or	Valuation / Allocation, Existence / Occurrence	Accuracy, Validity	Accounts Payable, Cost of Goods Sold, Revenue, Accounts Receivable	Manual	Event Driven	Inspected a sample of STLT invoices to determine whether these were verified by the WS staff and submitted to the Manager Transmission and Distribution (T&D) Settlements or delegate at Inergi's client for approval. For the same sample of STLT invoices, inspected the payable amounts in SAP to determine whether the invoiced amounts	No exceptions noted.

Control Objective 6:
Controls provide reasonable assurance that settlement transactions are authorized, calculated, transferred, invoiced, paid, and collected completely and accurately.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
	delegate at Inergi' s client for payment approval in SAP.						were routed to the Manager Transmission and Distribution (T&D) Settlements or delegate at Inergi's client for approval. Inquired of Wholesale Settlement personnel to determine whether the staff verifies the Load Transfer event and the charges on the inbound invoices and submits these to the Manager Transmission and Distribution (T&D) Settlements or delegate at Inergi's client for approval. Inquired of Wholesale Settlements personnel to determine whether the payable amounts are input by Inergi Account Payable into SAP based on approved invoices	

Control Objective 6:
Controls provide reasonable assurance that settlement transactions are authorized, calculated, transferred, invoiced, paid, and collected completely and accurately.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
							received from Wholesale Settlement, and whether the SAP approval request is then routed to Manager of Transmission and Distribution (T&D) Settlements or delegate at Inergi' s client for payment approval in SAP.	
6.10	For Short Term Load Transfer (STLT) (Outbound) the Wholesale Settlements staff verifies the Load Transfer event and the charges on the outbound invoices. The invoices are submitted to the Manager of Transmission and Distribution (T&D) Settlements or delegate at Inergi's client for approval to issue an invoice. Wholesale Staff create blocked sales orders based on this approval which is released by an independent Wholesale Settlements staff, for automatic creation of an invoice.	Valuation / Allocation, Existence / Occurrence	Accuracy, Validity	Accounts Payable, Cost of Goods Sold	Manual	Event Driven	Inspected a sample of STLT invoices to determine whether the appropriate verification of the Load Transfer event and the charges on the invoices was completed and whether the invoices were submitted to the Manager of Transmission and Distribution (T&D) Settlements or delegate at Inergi's client for approval.	No exceptions noted.

Control Objective 6:
Controls provide reasonable assurance that settlement transactions are authorized, calculated, transferred, invoiced, paid, and collected completely and accurately.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
							For the same sample of STLT invoices, inspect the invoices to determine whether the corresponding sales order was created by a Wholesale Settlements staff and released by an independent Wholesales Settlement staff. Inquired of Wholesale Settlements personnel to determine whether the staff verifies the Load Transfer event and the charges on the outbound invoices and whether the invoices are submitted to the Manager of Transmission and Distribution (T&D) Settlements or delegate at Inergi's client for approval to issue an invoice.	

Control Objective 6:
Controls provide reasonable assurance that settlement transactions are authorized, calculated, transferred, invoiced, paid, and collected completely and accurately.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
							Inquired of Wholesale Settlements personnel to determine whether the staff creates blocked sales orders based on this approval which is released by an independent Wholesale Settlements staff, for automatic creation of an invoice.	
	Power Purchases – Embedded Retail Generators							
6.11	WS staff set up ERG Business Partners accounts in SAP based on information provided by Inergi's client. The account set up in SAP is reviewed by a second member of the WS team who compares the set up in SAP with the generator information provided by Inergi's client.	Valuation / Allocation, Existence / Occurrence	Accuracy, Validity	Revenue, Accounts Payable	Manual	Event Driven	Inspected a sample of new ERG Business Partner accounts set up in SAP to determine whether a second member of the Wholesale Settlement team appropriately performed a review of each account. Inquired of Wholesale Settlement personnel to determine whether accounts set up are reviewed by a second member of the	No exceptions noted

Control Objective 6: Controls provide reasonable assurance that settlement transactions are authorized, calculated, transferred, invoiced, paid, and collected completely and accurately.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
							Wholesale Settlement team who compares the set up in SAP with the generator information provided by Inergi's client,	
6.12	SAP associates a generator with only one bank account of a Business Partner.	Completeness	Completeness	Accounts Payable, Cost of Goods Sold	Automated	Event Driven	Observed on screen to determine whether only one bank account of a Business Partner can be assigned to a generator in SAP. Inquired of Wholesale Settlement personnel to determine whether SAP associates a generator with only one bank account of a Business Partner.	No exceptions noted.
6.13	In SAP, payment statements for interval metered generators are calculated and generated based on hourly meter readings and either: • Fixed rate if the rate is specified in the signed contract/ connection agreement; or	Completeness, Valuation / Allocation, Existence / Occurrence	Accuracy	Accounts Payable, Cost of Goods Sold	Automated	Daily / Monthly	Re-performed a sample of generator statement calculations to determine whether generation statements have been calculated accurately in SAP, based on the hourly meter readings and either fixed rate if the	No exceptions noted.

Control Objective 6:
Controls provide reasonable assurance that settlement transactions are authorized, calculated, transferred, invoiced, paid, and collected completely and accurately.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
	• Hourly Ontario Energy Price (HOEP) where the rate is not specified in the signed contract/ connection agreement.						rate is specified in the signed contract/ connection agreement or hourly market prices (HOEP) where the rate is not specified in the signed contract/connection agreement. Inquired of Wholesale Settlement personnel to determine whether SAP calculates and generates statements for interval-metered generators based on hourly meter readings and either fixed rates if the rate is specified in the signed contract/ connection agreement or hourly market prices (HOEP) where the rate is not specified in the signed contract/connection agreement.	
6.14	Non-microFIT generator statement data exceptions, billing and invoice outsorts flagged by	Completeness, Valuation / Allocation,	Completeness, Accuracy, Validity	Accounts Payable,	Manual	Monthly	From the population of exceptions and outsorts handled by	No exceptions noted.

Control Objective 6: **Controls provide reasonable assurance that settlement transactions are authorized, calculated, transferred, invoiced, paid, and collected completely and accurately.**

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
	SAP due to validation checks are monitored and resolved monthly by Wholesale Settlements team.	Existence / Occurrence		Cost of Goods Sold			the Wholesale Settlements team, inspected a sample of generator statement data exceptions, billing and invoice outsorts flagged by SAP due validation checks, to determine whether they were monitored and resolved monthly by the Wholesale Settlements team. Inquired of Wholesale Settlements personnel to determine whether generator statement data exceptions are flagged by SAP due validation checks, and to determine whether these exceptions are monitored and resolved by the Wholesale Settlements team.	
6.15	Settlements staff enters banking or rate changes to non-microFIT retail generator data in SAP based	Completeness, Existence/ Occurrence	Accuracy	Accounts Payable,	Manual	Event Driven	Inspected a sample of banking and rate changes made to non-	No exceptions noted.

Control Objective 6:
Controls provide reasonable assurance that settlement transactions are authorized, calculated, transferred, invoiced, paid, and collected completely and accurately.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
	on requests from Inergi's client. An independent Settlements staff member reviews the change.			Cost of Goods Sold			microFIT retail generator data in SAP to determine whether changes made in SAP were made on requests from Inergi's client, and were reviewed by an independent Settlements staff member. Inquired of Settlements personnel to determine whether staff enters banking and rate changes to non-microFIT retail generator data in SAP based on requests from Inergi's client, and an independent Settlement staff member reviews the change entered in SAP.	
6.16	Requests to update HST or banking information to microFIT accounts are reviewed by the BCC for the appropriate original documentation prior to being sent	Completeness, Existence/ Occurrence	Accuracy, Validity	Accounts Payable, Cost of Goods Sold	Manual	Event Driven	Inspected a sample of HST and banking information changes made to microFIT retail generator data in	No exceptions noted.

Control Objective 6:
Controls provide reasonable assurance that settlement transactions are authorized, calculated, transferred, invoiced, paid, and collected completely and accurately.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
	to the Settlements team for processing.						SAP to determine whether the change information was reviewed by the BCC prior to being sent to the Settlements team for processing. Inquired of BCC personnel to determine whether staff review HST and banking information change requests for microFIT generator data to confirm that appropriate original documentation has been received, prior to forwarding these requests for further processing.	
6.17	Settlements staff enters changes to HST or banking information to microFIT accounts based on requests received from Inergi’s client or the BCC and puts a hold on the account in SAP. An independent Settlement staff reviews the change and removes the hold on the account.	Completeness, Existence/ Occurrence	Accuracy	Accounts Payable, Cost of Goods Sold	Manual	Event Driven	Inspected a sample of HST and banking information changes made to microFIT accounts to determine whether changes made in SAP were based on request received from Inergi’s client or the	No exceptions noted.

Control Objective 6:
Controls provide reasonable assurance that settlement transactions are authorized, calculated, transferred, invoiced, paid, and collected completely and accurately.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
							BCC and were reviewed by an independent Settlement staff member. Inquired of Settlements personnel to determine whether staff enters changes to HST and banking information to microFIT accounts in SAP based on requests from Inergi's client or the BCC, puts a hold on the account in SAP, and an independent Settlement staff reviews the change and removes the hold on the account.	
6.18	MicroFIT generator statement data exceptions, billing and invoice outsorts flagged by SAP due to validation checks, are monitored and resolved daily by Wholesale Settlements staff.	Completeness, Valuation / Allocation, Existence / Occurrence	Accuracy	Accounts Payable, Cost of Goods Sold	Manual	Daily	From the population of exceptions and outsorts handled by the Wholesale Settlements team, inspected a sample of microFIT generator data exceptions,	No exceptions noted.

Control Objective 6:
Controls provide reasonable assurance that settlement transactions are authorized, calculated, transferred, invoiced, paid, and collected completely and accurately.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
							billing and invoice outsorts flagged by SAP due to validation checks, to determine whether they were monitored and resolved daily by Wholesale Settlements staff. Inquired of Wholesale Settlements personnel to determine whether statement generator data exceptions, billing and invoice outsorts are flagged by SAP due to validation checks, and to determine whether these exceptions are monitored and resolved daily by Wholesale Settlements staff.	
6.19	Embedded Retail Generator contracts with generator statement data exceptions, billing or invoice outsorts flagged by SAP, will be not be billed.	Accuracy, Valuation / Allocation	Accuracy, Validity	Accounts Payable, Cost of Goods Sold	Automated	Event Driven	Inspected a sample of generator statement data exceptions, billing outsorts or invoice outsorts to determine that these	No exceptions noted.

Control Objective 6:
Controls provide reasonable assurance that settlement transactions are authorized, calculated, transferred, invoiced, paid, and collected completely and accurately.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
							exceptions prevented billing. Inquired of Wholesale Settlements personnel to determine that generator statement data exceptions, billing and invoice outsorts prevent billing.	
6.20	In SAP, payment statements for non-interval metered generators are calculated and generated based on either: • Fixed rates if the rate is specified in the signed contract/ connection agreement; or • Calendar month-based Net System Load Shape Weighted Average Hourly Spot Rate (NSLS WAHSP)where the rate is not specified in the signed contract/ connection agreement.	Completeness, Valuation / Allocation, Existence / Occurrence	Accuracy	Accounts Payable, Cost of Goods Sold	Automated	Daily / Monthly	Re-performed the payment calculation for a sample of non-interval metered generators to determine whether payments were calculated based on either fixed rates if the rate is specified in the signed contracted/connection agreement, or in the calendar month Net System Load Shape Weighted Average Hourly Spot Rate (NSLS WAHSP) where the rate is not specified in the signed	No exceptions noted.

Control Objective 6:
Controls provide reasonable assurance that settlement transactions are authorized, calculated, transferred, invoiced, paid, and collected completely and accurately.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
							contract/connection agreement. Inquired of Settlement staff to determine whether in the SAP system, payment statements for non-interval metered generators is calculated based on the fixed rates if the rate is specified in the signed contract/connection agreement, or the calendar month-based Net System Load Shape Weighted Average Hourly Spot Rate (NSLS WAHSP) where the rate is not specified in the signed contract/connection agreement.	
6.21	On a periodic basis Inergi staff access to maintain generator data within SAP, as provided by the roles, are reviewed for appropriateness by Inergi	Completeness, Valuation / Allocation, Existence / Occurrence,	Restricted Access	Accounts Payable, Cost of Goods Sold	Manual	Quarterly	Inspected the supporting documentation for a sample of access reviews relating to	No exceptions noted.

Control Objective 6:
Controls provide reasonable assurance that settlement transactions are authorized, calculated, transferred, invoiced, paid, and collected completely and accurately.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
	management, based on data provided by Inergi's client.	Rights / Obligations					maintain generator data within SAP, to determine whether the periodic review was performed for Inergi staff, and that staff access identified as being inappropriate was resolved. Inquired of Inergi management to determine whether access to maintain generator data within SAP for Inergi staff is reviewed on a periodic basis by Inergi management	
	Common Procedures – Payments							
6.22	The Cost of Power (COP) data and the SAP related GL accounts data is input into an Excel Spreadsheet for analysis through the Monthly COP GL reconciliation. These monthly reconciliations and reports are prepared by the Settlements staff and sent to Inergi's client for review.	Completeness, Valuation / Allocation, Existence / Occurrence	Completeness, Accuracy, Validity	Revenue, Accounts Receivable, Cost of Goods Sold, Accounts Payable	Manual	Monthly	Inspected the supporting documentation for a sample of COP Reconciliations to determine whether discrepancies were identified and the appropriate action taken.	No exceptions noted.

Control Objective 6: Controls provide reasonable assurance that settlement transactions are authorized, calculated, transferred, invoiced, paid, and collected completely and accurately.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
							Inquired of Wholesale Settlement personnel to determine whether the COP GL reconciliation is performed for COP entries in the SAP GL by the Settlements staff and sent to Inergi's client for review.	
Transmission Settlements								
6.23	The Settlement Analyst reviews the Monthly Settlement of Preliminary Transmission Reconciliation Data File (TRDF), Generic and Inergi's client, to compare the IESO Monthly Preliminary Settlement Statements with the proxy statements based on the totalized meter data and the hourly prices downloaded from the IESO. Any discrepancies exceeding the $1,000 per delivery point threshold are investigated. The Settlements Analyst prepares and	Completeness, Valuation / Allocation, Existence / Occurrence	Completeness, Accuracy, Validity	Revenue, Accounts Receivable	Manual	Monthly	Inspected a sample of reviews performed to determine whether any discrepancies exceeding the $1,000 per delivery point threshold were investigated, and whether the Settlements Analyst prepared and files a NOD with the IESO, as required. Inquired of the Settlement staff to determine whether the Settlement Analyst	No exceptions noted.

Control Objective 6: Controls provide reasonable assurance that settlement transactions are authorized, calculated, transferred, invoiced, paid, and collected completely and accurately.								
Description of Controls								
CA #	**Control Description**	**FS Assertion**	**Control Objective**	**Account**	**Control Type**	**Frequency**	**Testing of Operating Effectiveness**	**Results of Testing**
	files a NOD with the IESO, as required.						reviews the Monthly Settlement of Preliminary TRDF (Transmission Reconciliation Data File), Generic and Inergi's client, to compare the IESO Monthly Preliminary Settlement Statements with the proxy statements based on the totalized meter data and the hourly prices downloaded from the IESO. Inquired of Settlement staff to determine whether any discrepancies exceeding the $1,000 per delivery point threshold are investigated, and whether the Settlements Analyst prepares and files a NOD with the IESO, as required.	

Control Objective 6: Controls provide reasonable assurance that settlement transactions are authorized, calculated, transferred, invoiced, paid, and collected completely and accurately.								
Description of Controls								
CA #	**Control Description**	**FS Assertion**	**Control Objective**	**Account**	**Control Type**	**Frequency**	**Testing of Operating Effectiveness**	**Results of Testing**
RPP (Rate Protection Plan) Settlement (IESO Settlement/Bill 100 Fixed Price Settlement)								
6.24	Wholesale Settlements staff prepares the Approval Package containing the detailed calculations behind the settlement amount declared to IESO,: This package includes: • Regulated Price sales less HOEP, Generator contract costs less HOEP, Global Adjustment and any related true ups. • Quantities and dollars for each category. • The submissions made on behalf of the Embedded Local Distribution companies. The Team Lead, Wholesale Settlements and Inergi's client review and approve the declaration approval package before Inergi submits the package to the IESO.	Valuation / Allocation	Completeness, Accuracy, Validity	Revenue/ Cost of Goods Sold	Manual	Monthly	Inspected a sample of the monthly declaration package sent to the IESO to determine whether the declaration package has been approved by the Team Lead, Wholesale Settlements and Inergi's client. Inspected the supporting documentation for the calculation to determine whether the calculations were accurate. Inquired with Wholesale Settlement to determine whether Wholesale Settlements staff prepares the Approval Package containing the detailed calculations behind the settlement amount	No exceptions noted.

Control Objective 6:
Controls provide reasonable assurance that settlement transactions are authorized, calculated, transferred, invoiced, paid, and collected completely and accurately.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
							declared to IESO, and that the Team Lead, Wholesale Settlements and Inergi's client review and approve the declaration package before Inergi submits the declaration to the IESO.	
6.25	For the period through to April 30, 2015, Wholesale staff downloads the daily IESO's settlement statement from SAP and prepare the Charge Code Summary report and reconcile it to the IESO's monthly invoice on a monthly basis. Effective May 1 2015, Wholesale staff downloads the Charge Code Summary report from SAP and reconciles it to the IESO's monthly invoice on a monthly basis.	Completeness, Valuation / Allocation, Existence / Occurrence	Completeness, Accuracy, Validity	Payable, Cost of Goods Sold	Manual	Monthly	For the period through to April 30, 2015, inspected the supporting documentation for a sample of reconciliations performed to determine whether the Charge Code Summary report was prepared and reconciled to the IESO's monthly invoice. Inquired of Wholesale Settlement personnel to determine whether Wholesale Statement Operator downloads	No exceptions noted.

Control Objective 6:
Controls provide reasonable assurance that settlement transactions are authorized, calculated, transferred, invoiced, paid, and collected completely and accurately.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
							the daily IESO's settlement statement from SAP and prepares the Charge Code Summary report and reconciles it to the IESO's monthly invoice on a monthly basis. Effective May 1, 2015, inspected the supporting documentation for a sample of reconciliations performed to determine whether the Charge Code Summary report was reconciled to the IESO's monthly invoice. Inquired of Wholesale Settlement personnel to determine whether Wholesale Statement Operator downloads the Charge Code Summary report from SAP and reconcile it	

Control Objective 6:
Controls provide reasonable assurance that settlement transactions are authorized, calculated, transferred, invoiced, paid, and collected completely and accurately.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
							to the IESO's monthly invoice on a monthly basis.	
6.26	Effective March 1, 2016, the Settlement Analyst prepares the Monthly Transmission Services Summary Report based on information from SAP. The Network Factor of B2M is applied to the total network revenue and this is reconciled to the IESO monthly B2M invoice. Any discrepancies exceeding the$1,000 per delivery point threshold are investigated. The Settlements Analyst prepares and files a NOD with the IESO, as required.	Completeness, Valuation / Allocation, Existence / Occurrence	Completeness, Accuracy, Validity	Revenue, Accounts Receivable	Manual	Monthly	Effective March 1, 2016, inspected a sample of B2M reconciliations to determine whether any discrepancies exceeding the $1,000 per delivery point threshold were investigated, and whether the Settlements Analyst prepared and filed a NOD with the IESO, as required. Inquired of the Settlement staff to determine whether the Settlement Analyst prepares the Monthly Transmission Services Summary Report based on information from SAP, applies the Network Factor of B2M to the total network revenue, and	

Control Objective 6:
Controls provide reasonable assurance that settlement transactions are authorized, calculated, transferred, invoiced, paid, and collected completely and accurately.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
							reconciles this to the IESO monthly B2M invoice. Inquired of Settlement staff to determine whether any discrepancies exceeding the $1,000 per delivery point threshold are investigated, and whether the Settlements Analyst prepares and files a NOD with the IESO, as required.	

Control Objective 7: **Controls provide reasonable assurance that authorized payment data is applied to Business Partner and Customer accounts completely and accurately.**								
Description of Controls								
CA #	**Control Description**	**FS Assertion**	**Control Objective**	**Account**	**Control Type**	**Frequency**	**Testing of Operating Effectiveness**	**Results of Testing**
Non-Energy AR								
7.01	The AR Clerk applies Non-Energy Customer payment in SAP to Customer’s account using either, the invoice stub, cheque references, payment forms, EFT notification or wire notifications supplied by Inergi’s client, Inergi's client's customers or the Bank.	Valuation / Allocation, Existence / Occurrence	Accuracy, Validity	Cash, Accounts Receivable	Manual	Multiple Times a Day	Inspected a sample of Non-Energy Customer payments to determine whether Customer payments have been accurately applied in SAP based on invoice stubs, cheque references, payment forms, EFT notification or wire notifications provide by Inergi’s client, Inergi's client's customers or the Bank. Inquired of Accounts Receivable personnel to determine whether the AR Clerk applies payment in SAP to Customer’s account using either, the invoice stub, cheque references, payment forms, EFT notification or wire notifications supplied by Inergi’s client,	No exceptions noted.

Control Objective 7:
Controls provide reasonable assurance that authorized payment data is applied to Business Partner and Customer accounts completely and accurately.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
							Inergi's client's customers or the Bank.	
7.02	Access to cheques received after the courier pick-up is restricted to appropriate Financial Services personnel.	Completeness, Valuation / Allocation, Existence / Occurrence	Restricted Access	Cash, Accounts Receivable	Manual	Daily	Observed that cheques received after courier pick-up is locked in a safe which is restricted to appropriate Financial Services personnel. Inquired of Financial Services personnel to determine whether cheques received after the courier pick-up are locked in a safe, access to which is appropriately restricted.	No exceptions noted.
7.03	On a monthly basis, the Non-Energy AR Bank reconciliations are approved by appropriate independent Inergi personnel as indicated in the Account Control Listing from Inergi's client.	Completeness, Valuation / Allocation, Existence / Occurrence	Completeness, Accuracy, Validity	Cash, Accounts Receivable	Manual	Monthly	Inspected a sample of month-end Non-Energy AR Bank reconciliation reports to determine whether reconciliations have been reviewed/approved by appropriate independent Inergi personnel as	No exceptions noted.

Control Objective 7: Controls provide reasonable assurance that authorized payment data is applied to Business Partner and Customer accounts completely and accurately.								
Description of Controls								
CA #	**Control Description**	**FS Assertion**	**Control Objective**	**Account**	**Control Type**	**Frequency**	**Testing of Operating Effectiveness**	**Results of Testing**
							indicated in the Account Control Listing from Inergi's client. Inquired of Financial Services personnel to determine whether appropriate independent Inergi personnel as indicated in the Account Control Listing from Inergi's client reviews/approves the month-end Non-Energy AR Bank reconciliations to the GL.	
7.04	Adjustments to accounts related to refunds, other than credit card refunds, are made based on requests from Inergi's client as follows: • Refunds greater than $10,000 are approved by Inergi's client and refunds less than $10,000 are approved by Inergi's client or the Manager of Financial Services; and	Existence / Occurrence	Validity	Cash, Accounts Receivable	Manual	Multiple Times a Day	Inspected a sample of Non-Energy refunds to determine whether they have been approved by Inergi's client for refunds greater than $10,000 and by Inergi's client or the Manager of Financial Services for refunds less than	No exceptions noted.

Control Objective 7: **Controls provide reasonable assurance that authorized payment data is applied to Business Partner and Customer accounts completely and accurately.**

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
	• All refunds require a second level of approval based on SAP workflow.						$10,000, and that the refunds have a second level of approval based on SAP workflow. Inquired of Accounts Receivable personnel to determine whether the adjustments to accounts relating to refunds are made based on requests from Inergi's client as follows: • Refunds greater than $10,000 are approved by Inergi's client and refunds less than $10,000 are approved by Inergi's client or the Manager of Financial Services; and • All refunds require a second level of approval based on SAP workflow.	

Control Objective 7:
Controls provide reasonable assurance that authorized payment data is applied to Business Partner and Customer accounts completely and accurately.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
7.05	On a daily basis the AR Clerk generates a FI Missing Docs report from SAP to review any invoices which did not result in a posting to the GL and AR Sub-ledger. Discrepancies are investigated and communicated to Inergi's client until resolution.	Completeness	Completeness	Revenue, Accounts Receivable	Manual	Daily	Inspected a sample of the FI Missing Docs report to determine whether the reports have been reviewed and discrepancies are communicated to Inergi's client until resolution Inquired of Accounts Receivable personnel to determine whether the FI Missing Docs report is reviewed daily and that discrepancies are communicated to Inergi's client until resolution.	No exceptions noted.
7.06	Unidentified payments are transferred into a 'holding account' in SAP and investigated by the AR Clerk to apply payments to appropriate accounts.	Valuation / Allocation, Existence / Occurrence	Accuracy, Validity	Cash, Accounts Receivable	Manual	Event Driven	Inspected a sample of payments in the holding account to determine whether payments have been applied appropriately to Customer accounts. Inquired of Accounts Receivable personnel	No exceptions noted.

Control Objective 7:
Controls provide reasonable assurance that authorized payment data is applied to Business Partner and Customer accounts completely and accurately.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
							to determine whether unidentified payments are transferred into a 'holding account' in SAP and investigated by the AR Clerk to apply payments to appropriate accounts.	
	Distribution Generation Applications Cheque Processing							
7.07	On a daily basis, the BCC Team Coach verifies whether the Distributed Generation Application cheque information is accurately entered into Microsoft CRM by comparing the physical cheques received against the CRM Daily Payment Log.	Existence / Occurrence	Accuracy	Cash	Manual	Daily	Inspected a sample of cheques entered into CRM to determine whether the cheque information was verified by the BCC Team Coach against the CRM Daily Payment Log. Inquired of the BCC Team Coach to determine whether all Distributed Generation Application Cheque information entered into CRM is compared to the CRM Daily Payment Log on a daily basis.	No exceptions noted.

Control Objective 7:
Controls provide reasonable assurance that authorized payment data is applied to Business Partner and Customer accounts completely and accurately.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
7.08	On a monthly basis, the Unearned Revenue General Ledger accounts related to Distributed Generation Applications are analyzed against the connection status of the applications in CRM, as provided by Inergi's client, by a member of Inergi's Accounts Analysis Group. The analysis is approved by appropriate independent Inergi personnel as indicated in the Account Control Listing from Inergi's client. A copy of this analysis is provided to Inergi's client.	Completeness, Valuation / Allocation	Completeness, Accuracy	Unearned Revenue	Manual	Monthly	Inspected a sample of analyses performed to determine whether they were reviewed/approved by appropriate independent Inergi personnel as indicated in the Account Control Listing from Inergi's client, and whether copies of the analyses were provided to Inergi's client. Inquired of Financial Services personnel to determine whether: appropriate independent Inergi personnel as indicated in the Account Control Listing from Inergi's client reviews/approves the Unearned Revenue General Ledger account analysis reports; and	No exceptions noted.

Control Objective 7:
Controls provide reasonable assurance that authorized payment data is applied to Business Partner and Customer accounts completely and accurately.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
							a copy of the analysis is provided to Inergi's client for their review.	
Energy AR								
	System Interface Controls							
7.09	The CCC performs a transfer within SAP to remove items from the suspense account and apply these to Business Partner Contract Accounts.	Valuation / Allocation, Existence / Occurrence	Accuracy, Validity	Accounts Receivable	Manual	Daily	Inspected a sample of suspense account transfers to determine whether transfers were appropriately applied to Business Partner Contract accounts. Inquired of CCC personnel to determine whether the CCC agent performs a transfer within SAP to remove items from the suspense account and apply these to Business Partner Contract accounts.	No exceptions noted.
7.10	The reconciliation between the Energy Accounts Receivable Sub-Ledger and the General Ledger in	Completenes s, Valuation / Allocation	Completeness, Accuracy	Revenue, Accounts Receivable	Manual	Monthly	Inspected a sample of reconciliations between the Energy	No exceptions noted.

Control Objective 7:
Controls provide reasonable assurance that authorized payment data is applied to Business Partner and Customer accounts completely and accurately.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
	SAP is prepared by a member of the Accounts Analysis Group. The reconciliation is approved by appropriate independent Inergi personnel as indicated in the Account Control Listing from Inergi's client.						Accounts Receivable Sub-Ledger and General Ledger in SAP to determine whether the reconciliations were prepared by a member of the Accounts Analysis Group, discrepancies were investigated and resolved, and that the reconciliations were reviewed/approved by appropriate independent Inergi personnel as indicated in the Account Control Listing from Inergi's client. Inquired of Financial Services personnel to determine that appropriate independent Inergi personnel as indicated in the Account Control Listing from Inergi's	

Control Objective 7:
Controls provide reasonable assurance that authorized payment data is applied to Business Partner and Customer accounts completely and accurately.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
							client reviews/approves the reconciliation between the Energy Accounts Receivable Sub-Ledger and General Ledger in SAP as prepared by a member of the Accounts Analysis Group.	
7.11	The Accounting Services Clerk, Accounts Analysis Group performs monthly reconciliations of all Energy related bank accounts with the amounts recorded in SAP. Month-end reconciliations are approved by appropriate independent Inergi personnel as indicated in the Account Control Listing from Inergi's client and provided to Inergi's Client's Treasury Department for their approval.	Completeness, Valuation / Allocation, Existence / Occurrence	Completeness, Accuracy, Validity	Cash, Accounts Receivable	Manual	Monthly	Inspected a sample of monthly Energy related bank account reconciliations to determine whether amounts were accurately reconciled to SAP, the reconciliations were reviewed/approved by appropriate independent Inergi personnel as indicated in the Account Control Listing from Inergi's client, and provided to Inergi's client for their approval.	No exceptions noted.

Control Objective 7: **Controls provide reasonable assurance that authorized payment data is applied to Business Partner and Customer accounts completely and accurately.**

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
							Inquired of Financial Services personnel to determine whether the Accounting Services Clerk, Accounts Analysis Group performs a monthly reconciliation of all Energy related bank accounts with the amounts recorded in SAP. And that the month-end reconciliations are reviewed/approved by appropriate independent Inergi personnel as indicated in the Account Control Listing from Inergi's client and provided to Inergi's Client's Treasury Department for their approval.	
	Business Partner Overpayment / Credit on Final Bill							
7.12	Refund cheques are produced and applied to the Business Partner	Valuation / Allocation,	Accuracy, Validity	Cash, Refunds	Manual	Daily	Inspected a sample of refund requests to determine whether	Exceptions noted.

Control Objective 7: **Controls provide reasonable assurance that authorized payment data is applied to Business Partner and Customer accounts completely and accurately.**

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
	account only after review and approval per the OAR.	Existence / Occurrence					credit cheques are produced and applied to the Business Partner account after appropriate approval per the OAR. Inquired of CCC personnel to determine whether refunds for credits are produced and applied to the Business Partner account only after review and approval per the OAR.	
7.13	Reports, which identify discrepancies between the latest cheque log at the bank and the cheques cashed, are downloaded from the bank website by the Agent of the Cashiering Group. The Agent investigates the accounts and discrepancies with the cheque information provided. Instructions to 'Pay' or 'Return' are sent by the Agent to the bank using the bank's online functionality. Disapproved cheques are reversed at the bank.	Valuation / Allocation, Existence / Occurrence	Accuracy, Validity	Cash, Refunds	Manual	Daily	Inspected a sample of reports to determine whether discrepancies between cheques printed and cheques cashed have been investigated and that appropriate instructions have been relayed to the bank. Inquired of the Agent of the Cashiering Group to determine	No exceptions noted.

Control Objective 7: **Controls provide reasonable assurance that authorized payment data is applied to Business Partner and Customer accounts completely and accurately.**								
Description of Controls								
CA #	**Control Description**	**FS Assertion**	**Control Objective**	**Account**	**Control Type**	**Frequency**	**Testing of Operating Effectiveness**	**Results of Testing**
							whether discrepancies identified in the reports are investigated and appropriate instructions are relayed to the bank.	
7.14	On a periodic basis Inergi staff access to apply payments in AR within SAP, as provided by the roles, are reviewed for appropriateness by Inergi management, based on data provided by Inergi's client.	Completeness, Valuation / Allocation, Existence / Occurrence, Rights / Obligations	Restricted Access	Revenue, Accounts Receivable	Manual	Quarterly	Inspected the supporting documentation for a sample of access reviews relating to apply payments in AR within SAP, to determine whether the periodic review was performed for Inergi staff, and that staff access identified as being inappropriate was resolved. Inquired of Inergi management to determine whether access to apply payments in AR within SAP for Inergi staff is reviewed on a	No exceptions noted.

Control Objective 7: **Controls provide reasonable assurance that authorized payment data is applied to Business Partner and Customer accounts completely and accurately.**								
Description of Controls								
CA #	**Control Description**	**FS Assertion**	**Control Objective**	**Account**	**Control Type**	**Frequency**	**Testing of Operating Effectiveness**	**Results of Testing**
							periodic basis by Inergi management.	
NON-ENERGY AR								
	Credit Card Refunds							
7.15	For the period through to November 30, 2015, adjustments to accounts related to credit card refunds, are made based on credit invoices or requests from Inergi's client as follows: • Refunds greater than $10,000 are approved by Inergi's client; and • Refunds less than $10,000 are approved by the Senior Manager, Financial Services. Effective December 1, 2015, adjustments to accounts related to credit card refunds, are made based on credit invoices or requests from Inergi's client. Credit card refunds that require entry of credit card information are approved by the Senior Manager, Financial Services.	Existence / Occurrence	Validity	Cash, Accounts Receivable	Manual	Event Driven	For the period through to November 30, 2015, inspected a sample of Non-Energy credit card refunds to determine whether they are made based on credit invoices or requests from Inergi's client and approved by the Senior Manager, Financial Services or Inergi's client as required: • Refunds greater than $10,000 are approved by Inergi's client; and • Refunds less than $10,000 are approved by the Senior Manager,	No exceptions noted.

Control Objective 7: Controls provide reasonable assurance that authorized payment data is applied to Business Partner and Customer accounts completely and accurately.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
							Financial Services. Inquired of Accounts Receivable personnel to determine whether credit card refunds are made based on credit invoices or requests from Inergi's client and approved by the Senior Manager, Financial Services or Inergi's client as required. Effective December 1, 2015, inspected a sample of Non-Energy credit card refunds to determine whether they are made based on credit invoices or requests from Inergi's client and whether credit card refunds that required entry of credit card information were approved by the	

Control Objective 7:
Controls provide reasonable assurance that authorized payment data is applied to Business Partner and Customer accounts completely and accurately.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
							Senior Manager, Financial Services. Inquired of Accounts Receivable personnel to determine whether credit card refunds are made based on credit invoices or requests from Inergi's client and whether credit card refunds that require entry of credit card information are approved by the Senior Manager, Financial Services.	
7.16	An Accounting Clerk independent of the processing clerk reviews all credit card refunds made to determine that they were properly approved and appropriate supporting documentation was attached. In order to ensure segregation of duties, the Accounting Clerk who enters the refunds is not involved in this review.	Existence / Occurrence	Validity	Cash, Accounts Receivable	Manual	Event Driven	Inspected a sample of Non-Energy credit card refunds to determine whether they are independently reviewed by a clerk not involved in entering the refunds. Inquired of Accounts Receivable personnel to determine whether	No exceptions noted.

Control Objective 7:
Controls provide reasonable assurance that authorized payment data is applied to Business Partner and Customer accounts completely and accurately.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
							an Accounting Clerk reviews all credit card refunds made to determine that they were properly approved and appropriate supporting documentation was attached. Further inquired that in order to ensure segregation of duties, the Accounting Clerk who enters the payments is not involved in this review	
7.17	An Accounting Clerk independent of the processing clerk conducts a weekly review based on a listing from the SAP GL account to verify that all credit card refunds entered into SAP were reviewed.	Completeness	Validity	Cash, Accounts Receivable	Manual	Weekly	Inspected a sample of Non-Energy credit card refunds weekly reviews conducted by a clerk not involved in entering the refunds to determine whether all refunds on the SAP GL account listing were reviewed. Inquired of Accounts	No exceptions noted.

Control Objective 7:
Controls provide reasonable assurance that authorized payment data is applied to Business Partner and Customer accounts completely and accurately.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
							Receivable personnel to determine whether an Accounting Clerk independent of the processing clerk conducts a weekly review based on a listing from the SAP GL account to verify that all credit card refunds entered into SAP were reviewed.	

Exceptions Noted:

7.12 - For one of the 32 credits sampled, a refund was processed to the Business Partner despite an instruction to reject from the OAR authorized individual.

Control Objective 8:
Controls provide reasonable assurance that aged Business Partner accounts receivable are processed through authorized termination and write-off procedure completely and accurately.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
Allowance for Doubtful Accounts (AFDA)								
8.01	An automated journal entry is posted to the SAP GL at the month-end based on the approved AFDA rates configured in SAP. In case of additional provisioning required, a manual journal entry is prepared and posted to the SAP GL by the Senior Finance Specialist based on approval from Inergi's client.	Valuation / Allocation, Existence / Occurrence	Accuracy, Validity	Accounts Receivable, Allowance for Doubtful Accounts	Automated/ Manual	Monthly	Inspected a sample of automated monthly AFDA journal entries to determine that these are automatically posted to the SAP GL at the month-end based on the approved AFDA rates configured in SAP. Inspected a sample of manual AFDA journal entries to determine whether the entries were authorized by Inergi's client. Inquired of Financial Services personnel to determine whether automated journal entries are posted to the SAP GL at month-end based on approved AFDA rates configured in SAP.	No exceptions noted.

Control Objective 8:
Controls provide reasonable assurance that aged Business Partner accounts receivable are processed through authorized termination and write-off procedure completely and accurately.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
							In case of additional provisioning required, a manual journal entry is prepared and posted to the SAP GL by the Senior Finance Specialist based on approval from Inergi's client.	
8.02	On a monthly basis, the Senior Financial Specialist, Accounts Analysis Group reviews the Aging Reports which include the: • Independent validation of SAP GL 213050 (AFDA account) using raw AR data in SAP • AR balances for Contracts >=$500k • AR balances for Contracts <= ($100k) These reports are provided to Inergi's client.	Completeness, Existence / Occurrence	Validity	Revenue, Accounts Receivable	Manual	Monthly	Inspected a sample of monthly Aging Reports to determine whether the review has been performed monthly, and reports reviewed include: • Independent validation of SAP GL 213050 (AFDA account) using raw AR data in SAP • AR balances for Contracts >=$500k, • AR balances for Contracts <= ($100k), and whether the reports have been	No exceptions noted.

Control Objective 8:
Controls provide reasonable assurance that aged Business Partner accounts receivable are processed through authorized termination and write-off procedure completely and accurately.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
							provided to Inergi's client. Inquired of Financial Services personnel to determine whether the Senior Financial Specialist, Accounts Analysis Group reviews Aging Reports on a monthly basis, which include the: • Independent validation of SAP GL 213050 (AFDA account) using raw AR data in SAP • AR balances for Contracts >=$500k • AR balances for Contracts <= ($100k); and whether these reports are provided to Inergi's client.	
Account Collections								

Control Objective 8:
Controls provide reasonable assurance that aged Business Partner accounts receivable are processed through authorized termination and write-off procedure completely and accurately.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
	Energy AR Collections							
8.03	The Eligible to Cut List is reviewed daily to prioritize the top number of accounts, as directed by Inergi's client, for whom cut-out orders will be issued through SAP. Disconnect documents are triggered in SAP for the accounts on the prioritized list.	Existence / Occurrence	Validity	Revenue, Accounts Receivable	Automated / Manual	Daily	For a sample of days, inspected the ZCUTLIST Report to determine whether top accounts from the 'Eligible to Cut' list were prioritized and communicated to Inergi's client. For a sample of prioritized accounts, inspected evidence to determine that a disconnect notice was sent to the customer, and whether a cut-order was issued and a disconnect document, triggered. Inquired of CCC personnel to determine whether the Eligible to Cut List is reviewed daily to prioritize the top number of accounts, as directed by Inergi's client, for whom cut-	No exception noted.

Control Objective 8:
Controls provide reasonable assurance that aged Business Partner accounts receivable are processed through authorized termination and write-off procedure completely and accurately.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
							out orders will be issued through SAP, and whether disconnect documents are triggered for the accounts on the prioritized list.	
8.04	Final account balances outstanding are automatically written off in SAP after 90 calendar days from the final bill due date via a weekly batch job run.	Completeness; Accuracy; Existence / Occurrence; Valuation	Completeness, Accuracy, Validity	Expenses	Automated / Manual	Event Driven	Inspected a sample of final billed accounts with outstanding balances to determine whether balances were automatically written off in SAP after 90 calendar days from the final bill due date via a weekly batch job run.. Inquired of BCC personnel to determine whether accounts with final account balances are automatically written off in SAP after 90 calendar days from the final bill due date via a weekly batch job run.	No exceptions noted.

Control Objective 8:
Controls provide reasonable assurance that aged Business Partner accounts receivable are processed through authorized termination and write-off procedure completely and accurately.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
8.05	Accounts written off with balances outstanding greater than $5000 are reviewed monthly by the CC Agent to identify accounts without collection activities. Accounts without collection activities are followed up and resolved on a timely basis. The CCC Team Lead or Manager conducts an independent review of the greater than $5,000 Write Off Report to ensure all write offs have been actioned for collection activities.	Existence / Occurrence; Valuation	Validity	Expenses	Manual	Monthly	Inspected a sample of monthly greater than $5000 Write Off Reports to determine whether the CCC Team Lead or Manager conducted an independent review of the write-offs greater than $5000 to ensure that all items on the report have been actioned for collection activities by the Agent. Inquired of CCC personnel to determine whether on a monthly basis, the CCC Agent reviews all accounts written off with balances outstanding greater than $5000 to identify accounts without collection activities. Accounts without collection activities are followed up and	No exceptions noted.

Control Objective 8:
Controls provide reasonable assurance that aged Business Partner accounts receivable are processed through authorized termination and write-off procedure completely and accurately.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
							resolved on a timely basis. The CCC Team Lead or Manager conducts an independent review of accounts greater than $5000 to ensure that all accounts have been actioned for collection activities by the CCC Agent.	
8.06	Accounts written off are reconciled to the SAP GL monthly by a member of the, Accounts Analysis Group and approved by independent Inergi personnel as indicated in the Account Control Listing from Inergi's client.	Completeness, Existence / Occurrence	Completeness, Accuracy, Validity	Expenses	Manual	Monthly	Inspected the reconciliations to determine whether accounts written off have been reconciled to the SAP GL by a member of the Accounts Analysis Group and the reconciliation is reviewed/approved by independent Inergi personnel as indicated in the Account Control Listing from Inergi's client. Inquired with the Senior Financial Specialist, Accounts	No exceptions noted.

Control Objective 8:
Controls provide reasonable assurance that aged Business Partner accounts receivable are processed through authorized termination and write-off procedure completely and accurately.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
							Analysis Group to determine that the write-off reconciliation to the SAP General Ledger is prepared by a member of the Accounts Analysis Group and reviewed/approved by independent Inergi personnel as indicated in the Account Control Listing from Inergi's client.	
8.07	Subsequent collections pertaining to accounts written off are recorded to a recovery GL account by a daily incoming payment batch job in SAP. At month-end, an analysis of the bad debt recovery account GL 620500 is prepared by a member of the Accounts Analysis Group by identifying batch transfers and manual adjustments that are entered into this account. A copy of the analysis is approved by independent Inergi personnel as indicated in the Account Control Listing from Inergi's client before	Valuation / Allocation, Existence / Occurrence	Accuracy, Validity	Recovery	Manual	Monthly	Inspected a sample of monthly bad debt recovery account analyses prepared by a member of the Accounts Analysis Group to determine whether the analyses were prepared; discrepancies were identified and investigated; and a copy of the analysis reviewed/approved by independent Inergi personnel as indicated	No exceptions noted.

Control Objective 8: **Controls provide reasonable assurance that aged Business Partner accounts receivable are processed through authorized termination and write-off procedure completely and accurately.**								
Description of Controls								
CA #	**Control Description**	**FS Assertion**	**Control Objective**	**Account**	**Control Type**	**Frequency**	**Testing of Operating Effectiveness**	**Results of Testing**
	being provided to Inergi's client for their review.						in the Account Control Listing from Inergi's client before being provided to Inergi's client for their review. Inquired of Financial Services personnel to determine whether subsequent collections pertaining to accounts written off are recorded to a recovery GL account by a daily incoming payment batch job in SAP. Further inquired that at month-end, an analysis of the bad debt recovery account GL 620500 is prepared by a member of the Accounts Analysis Group by identifying batch transfers and manual adjustments that are entered into this account, and a	

Control Objective 8: Controls provide reasonable assurance that aged Business Partner accounts receivable are processed through authorized termination and write-off procedure completely and accurately.								
Description of Controls								
CA #	**Control Description**	**FS Assertion**	**Control Objective**	**Account**	**Control Type**	**Frequency**	**Testing of Operating Effectiveness**	**Results of Testing**
							copy of the analysis is reviewed/approved by independent Inergi personnel as indicated in the Account Control Listing from Inergi's client before being provided to Inergi's client for their review.	
	Non-Energy AR Collections							
8.08	Adjustments to accounts related to non-energy write-offs (including those related to Late Payment Interest Charges and other write-offs) are made based on requests from Inergi's client.	Existence / Occurrence	Validity	Cash, Accounts Receivable	Manual	Multiple Times a Day	Inspected a sample of non-energy write-off's to determine whether they have been requested by Inergi's client. Inquired of Accounts Receivable personnel to determine whether the adjustments to accounts relating to non-energy write-offs and are made based on requests from Inergi's client. These write-offs include Late Payment Interest Charges (LPIC) and write-offs other than	No exceptions noted.

Control Objective 8:
Controls provide reasonable assurance that aged Business Partner accounts receivable are processed through authorized termination and write-off procedure completely and accurately.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
							Late Payment Interest Charges (LPIC).	

Purchase to Pay

In scope of Report

Out of scope of Report (Client Retained Procedures)

	Control Objective	Completeness	Accuracy	Validity	Restricted Access
	9) Purchase Requests	*	✓	✓	✓
	10) Master Data (Supply Chain and Accounts Payable)	✓	✓	✓	✓
	11) Invoices	✓	✓	✓	✓
	12) Payments	✓	✓	✓	✓

<u>Control Objectives</u>

- Completeness: All transactions that occurred are entered and accepted for processing
- Accuracy: Transactions are recorded at the correct amount, in the appropriate account, on a timely basis (in the proper period)
- Validity: All recorded transactions actually occurred (are real), relate to the organization and were approved by designated personnel
- Restricted Access: Transaction processing and data is protected against unauthorized amendments, its confidentiality and physical assets are protected

* – Completeness is not included as a control objective for purchase order processing because failure to process purchase orders is an operational risk and the financial transaction does not occur until the associated goods or services are received.

Control Objective 9:
Controls provide reasonable assurance that requests for authorized purchases are processed appropriately.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
9.01	On a periodic basis Inergi staff authorization limits for Purchase Requisitions, Outlining Agreements and Purchase Orders, as provided by the roles, are reviewed for appropriateness against the Decision and Limits for Suppliers Document by Inergi management, based on data provided by Inergi's client.	Existence / Occurrence	Validity	Purchases, Accounts Payable	Manual	Quarterly	Inspected the supporting documentation for a sample of authorization limits reviews relating to Purchase Requests, Outlining Agreements and Purchase Orders, to determine whether the periodic review was performed for Inergi staff, and that staff access identified as being inappropriate was resolved. Inquired of Inergi management to determine whether authorization limits set up in SAP for Purchase Requests, Outlining Agreements and Purchase Orders, for Inergi staff is reviewed on a periodic basis by Inergi management.	No exceptions noted.

Control Objective 9:
Controls provide reasonable assurance that requests for authorized purchases are processed appropriately.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
9.02	Purchase requests manually created in the system are approved in SAP based on defined authorization limits.	Existence / Occurrence	Validity	Purchases, Accounts Payable	Automated	Event Driven	Observed the attempt of approving a purchase request in SAP by a user with lower authority, to determine whether the system rejects the approval. Inquired of SMS personnel to determine whether purchase requests manually created in the system are approved in SAP based on authorization limits set up.	No exceptions noted.
9.03	Outlining Agreements' Purchase Orders and Spot Purchase Orders greater than $50,000 must be supported by Memorandum of Purchase Approval (MPA) or equivalent document that provides direction on final vendor selection prior to releasing the Purchase Orders in SAP to the vendor, unless otherwise directed by Inergi's client.	Valuation / Allocation, Existence / Occurrence	Validity	Purchases, Accounts Payable	Manual	Event Driven	Inspected a sample of Purchase Orders over $50,000 to determine whether they have been approved in SAP and supported by an approved Memorandum of Purchase Approval or equivalent document.	No exceptions noted.

Control Objective 9:
Controls provide reasonable assurance that requests for authorized purchases are processed appropriately.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
							Inquired of Financial Services personnel to determine whether Outlining Agreements Purchase Orders and Spot Purchase Orders greater than $50,000 must be manually approved through a Memorandum of Purchase Approval, prior to release of the Purchase Order in SAP to the vendor, unless otherwise directed by Inergi's client.	
9.04	Spot Purchase Orders less than $50,000 are approved in SAP before the Purchase Order is issued to the vendor, according to the defined limits.	Valuation / Allocation, Existence / Occurrence	Validity	Purchases, Accounts Payable	Automated	Event Driven	Observed the attempt of approving a Purchase Order in SAP by a user with lower authority, to determine whether the system rejects the approval. Inquired of SMS personnel to determine whether Spot Purchase Orders	No exceptions noted.

Control Objective 9:
Controls provide reasonable assurance that requests for authorized purchases are processed appropriately.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
							less than $50,000 are approved in SAP as per the limits set up before the Purchase Order is issued to the vendor.	
9.05	SAP permits generation of the Purchase Orders based on a Purchase Requisition only when the Purchase Requisition has been previously approved.	Valuation / Allocation, Existence / Occurrence	Validity	Purchases, Accounts Payable	Automated	Event Driven	Observed the attempt of creating a Purchase Order to determine whether SAP prevents the creation of a Purchase Order without reference to an approved Purchase Requisition. Inquired of SMS personnel to determine whether SAP permits generation of the Purchase Orders based on Purchase Requisition only when the Purchase Requisition has been previously approved.	No exceptions noted.
9.06	On a periodic basis Inergi staff access to approve Purchase Requisitions, Outlining	Completeness Valuation / Allocation,	Restricted Access	Purchases, Accounts Payable	Manual	Quarterly	Inspected the supporting documentation for a	No exceptions noted.

Control Objective 9:
Controls provide reasonable assurance that requests for authorized purchases are processed appropriately.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
	Agreements and Purchase Orders, as provided by the roles, are reviewed for appropriateness by Inergi management, based on data provided by Inergi's client. On a periodic basis, Inergi management conducts a review, based on data provided by Inergi's client, to determine that Inergi staff do not have conflicting roles to perform the following functions: • Approval of Purchase Requisitions • Approval of Purchase Orders On a periodic basis, Inergi management conducts a review, based on data provided by Inergi's client, to determine that Inergi staff do not have conflicting roles to perform the following functions: • Purchase Order Function • Accounts Payable Function • Goods Receipt Function	Existence / Occurrence, Rights / Obligations					sample of access reviews relating to Purchase Requisition, Outlining Agreements and Purchase Order approvals, to determine whether the periodic review was performed for Inergi staff, and that staff access identified as being inappropriate was resolved. Inspected the supporting documentation for a sample of segregation of access reviews relating to the Approval of Purchase Requisitions and the Approval of Purchase Orders, to determine whether the periodic review was performed for Inergi staff, and that staff access identified as having conflicts was	

Control Objective 9: **Controls provide reasonable assurance that requests for authorized purchases are processed appropriately.**

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
							appropriately resolved. Inspected the supporting documentation for a sample of segregation of access reviews relating to Purchase Order Function, Accounts Payable Function and Goods Receipt Function, to determine whether the periodic review was performed for Inergi staff, and that staff access identified as having conflicts was appropriately resolved. Inquired of Inergi management to determine whether: • Access to approve Purchase Requisitions, Outlining Agreements and Purchase Orders,	

Control Objective 9: Controls provide reasonable assurance that requests for authorized purchases are processed appropriately.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
							for Inergi staff is reviewed on a periodic basis by Inergi management; • Segregation of access reviews over the Approval of Purchase Requisitions and the Approval of Purchase Orders, for Inergi staff is reviewed on a periodic basis by Inergi management; and • Segregation of access reviews over the Purchase Order Function, Accounts Payable Function and Goods Receipt Function, for Inergi staff is reviewed on a periodic basis by Inergi management.	

Control Objective 9:
Controls provide reasonable assurance that requests for authorized purchases are processed appropriately.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
9.07	On a periodic basis Inergi staff access to process client initiated requests for changes to approval limits for Purchase Orders and Purchase Requisition, as provided by the roles, are reviewed for appropriateness by Inergi management, based on data provided by Inergi's client.	Completeness, Valuation / Allocation, Existence / Occurrence, Rights / Obligations	Restricted Access	Purchases, Accounts Payable	Manual	Quarterly	Inspected the supporting documentation for a sample of access reviews relating to the processing of client initiated requests for changes to approval limits for Purchase Orders and Purchase Requisition, to determine whether the periodic review was performed for the Inergi staff, and that staff access identified as being inappropriate was resolved. Inquired of Inergi management to determine whether access to process client initiated requests for changes to approval limits, as provided by the roles, is reviewed on a periodic basis by Inergi management.	No exceptions noted.

Control Objective 9:
Controls provide reasonable assurance that requests for authorized purchases are processed appropriately.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
9.08	The system is configured to prevent Purchase Orders from being raised against expired Outlining Agreements or when the value of the Outlining Agreements has been exhausted.	Existence / Occurrence	Validity	Purchases, Accounts Payable	Automated	Event Driven	Inquired of the Supply Chain Manager to determine whether SAP prevents the creation of an Outlining Agreement Purchase Order release when the aggregate value of releases exceeds the Outlining Agreement Purchase Order value or the release date is later than Outlining Agreement Purchase Order validity date. Observed on-line the attempt of creating an Outlining Agreement Purchase Order release in cases where: 1) the aggregate value of releases exceeds the Outlining Agreement Purchase Order value; and 2) the release date is later than Outlining Agreement Purchase Order validity date, to	No exceptions noted.

Control Objective 9:
Controls provide reasonable assurance that requests for authorized purchases are processed appropriately.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
							determine whether the system prevented the release.	
9.09	A Supply Management Services Clerk reconciles reports generated by the SAP System identifying purchase orders sent electronically to confirmation reports showing successful and unsuccessful transfers of the electronic files, and identifies, investigates and resolves any discrepancies.	Completeness, Existence / Occurrence, Valuation / Allocation, Presentation / Disclosure	Completeness, Accuracy	Purchases	Manual	Daily	Inspected a sample of reconciliations to determine whether comparisons were performed and differences identified, investigated and resolved. Inquired of SMS personnel to determine whether reconciliation s are performed between Purchase Orders sent electronically and confirmation reports of successful and unsuccessful electronic file transfer comparisons are performed and differences identified, investigated and resolved between the SAP purchase orders sent electronically to	No exceptions noted.

Control Objective 9:
Controls provide reasonable assurance that requests for authorized purchases are processed appropriately.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
							the confirmation of successful or unsuccessful transfers of the electronic files.	
9.10	The SAP System maintains an audit trail of the time and activity of any modifications to an approved purchase order.	Completeness, Existence / Occurrence, Valuation / Allocation, Presentation / Disclosure	Completeness, Accuracy	Purchases	Automated	Event Driven	Inspected a sample of approved purchase orders to determine whether the SAP System maintains an audit trail of the time and activity of any modifications to the purchase order. Inquired of SMS personnel to determine whether the SAP System maintains an audit trail of the time and activity of any modifications to an approved purchase order.	No exceptions noted.

Control Objective 9:
Controls provide reasonable assurance that requests for authorized purchases are processed appropriately.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
9.11	The SAP System posts goods received not yet invoiced to the GR/IR account in the General Ledger, when entered.	Completeness, Existence / Occurrence, Valuation / Allocation, Presentation / Disclosure	Completeness, Accuracy	Purchases	Automated	Event Driven	Inspected a sample of receipts that did not have an invoice to determine whether the GR/IR account was updated correctly in the General Ledger. Inquired of SMS personnel to determine whether the SAP System posts goods received not yet invoiced to the GR/IR account in the General Ledger, when entered.	No exceptions noted.
9.12	A Purchase Requisition cannot be approved by the initiator.	Completeness, Valuation / Allocation, Existence / Occurrence, Rights / Obligations	Restricted Access	Purchases	Automated	Event Driven	Observed the attempt of approving a Purchase Requisition by the initiator of the Purchase Requisition to determine whether the system prevented the initiator from approving their Purchase Requisition. Inquired of Inergi Management to determine whether the	No exceptions noted.

Control Objective 9: **Controls provide reasonable assurance that requests for authorized purchases are processed appropriately.**

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
							system prevented the initiator from approving their Purchase Requisition.	

Control Objective 10: Controls provide reasonable assurance that changes to the vendor database are complete, accurate and authorized.								
Description of Controls								
CA #	**Control Description**	**FS Assertion**	**Control Objective**	**Account**	**Control Type**	**Frequency**	**Testing of Operating Effectiveness**	**Results of Testing**
10.01	Changes to the Vendor Master in the SAP system are processed: • By the Vendor Admin Clerk for PO-based purchases, based on the Vendor Request form approved by Inergi's Buyer or appropriate documentation received from the vendor or; • By the Vendor Admin Clerk for vendor codes associated with non-PO purchases, based on details provided by Vendors or Inergi's client through cheque requisitions. The non-PO invoice with the vendor information is subject to approval by Inergi's client. For vendor changes not associated with a non-PO invoice, other supporting documentation is provided.	Existence / Occurrence	Validity	Purchases, Accounts Payable	Manual	Event Driven	For PO-based purchases, inspected a sample of new vendor creations and changes to existing vendors to determine whether vendors created or changed in the Vendor Master in SAP were approved by the Buyer, or appropriate documentation was received from the vendor. Inspected a sample of one-time vendors created in SAP to determine whether they were for non-PO based purchases and whether the non-PO invoices were approved by Inergi's client or other supporting documentation provided.	No exceptions noted.

Control Objective 10:
Controls provide reasonable assurance that changes to the vendor database are complete, accurate and authorized.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
							Inquired of SMS personnel to determine whether the Vendor Admin Clerk creates new vendors or updates the vendor master in SAP based on the Vendor Request form approved by Inergi's buyer or appropriate documentation received from the vendor for PO-based purchases, and by the Vendor Admin Clerk or Accounts Payable group based on details provided by Vendors or Inergi's client through cheque requisitions for non-PO based purchases and whether the non-PO invoices are approved by Inergi's client.	
10.02	On a periodic basis Inergi staff access to update the Vendor Master, as provided by the roles,	Existence / Occurrence, Completeness,	Restricted Access	Purchases, Accounts Payable	Manual	Quarterly	Inspected the supporting documentation for a	No exceptions noted.

Control Objective 10:
Controls provide reasonable assurance that changes to the vendor database are complete, accurate and authorized.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
	are reviewed for appropriateness by Inergi management, based on data provided by Inergi's client. On a periodic basis, Inergi management conducts a review, based on data provided by Inergi's client, to determine that Inergi staff do not have conflicting roles to perform the following functions: • Purchase Order Processing • Invoice Processing • Payment Processing • Vendor Master Maintenance	Valuation / Allocation					sample of access reviews relating to Vendor Master maintenance, to determine whether the periodic review was performed for Inergi staff, and that staff access identified as being inappropriate was resolved. Inspected the supporting documentation for a sample of segregation of access reviews relating to Purchase Order Processing, Invoice Processing, Payment Processing and Vendor Master Maintenance, to determine whether the periodic review was performed for Inergi staff, and that staff access identified as having conflicts	

Control Objective 10:
Controls provide reasonable assurance that changes to the vendor database are complete, accurate and authorized.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
							was appropriately resolved. Inquired of Inergi management to determine whether: • Access to update the Vendor Master for Inergi staff is reviewed on a periodic basis by Inergi management; and • Segregation of access reviews over Purchase Order Processing, Invoice Processing, Payment Processing and Vendor Master Maintenance, for Inergi staff is reviewed on a periodic basis by Inergi management.	

Control Objective 10:
Controls provide reasonable assurance that changes to the vendor database are complete, accurate and authorized.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
10.03	SAP prevents entry of duplicate vendor ID numbers.	Completeness, Existence / Occurrence	Completeness, Accuracy	Purchases, Accounts Payable	Automated	Event Driven	Observed the attempt of entering a duplicate vendor ID number in SAP to determine whether the duplicate vendor ID number was rejected. Inquired of SMS personnel to determine whether SAP prevents entry of duplicate vendor ID numbers.	No exceptions noted.
10.04	Changes to the Vendor Master are reviewed on a quarterly basis by the Client Engagement Senior Manager.	Existence / Occurrence	Accuracy, Validity	Purchases, Accounts Payable	Manual	Quarterly	Inspected a sample of vendor master change reports from SAP to determine whether they were reviewed quarterly by the Client Engagement Senior Manager. Inquired of Financial Services personnel to determine whether Vendor Master changes are reviewed quarterly by the	No exceptions noted.

Control Objective 10:
Controls provide reasonable assurance that changes to the vendor database are complete, accurate and authorized.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
							Client Engagement Senior Manager.	
10.05	Changes to vendor master data in SAP related to banking information are reviewed for accuracy of input and approved by authorized persons within Inergi, based on SAP workflow.	Existence / Occurrence, Accuracy	Accuracy	Purchases, Accounts Payable	Manual	Event Driven	Inspected a sample of vendor master data changes in SAP related to banking information to determine whether they were independently reviewed for accuracy of input and approved by authorized Inergi personnel based on SAP workflow. Inquired of Financial Services personnel to determine whether vendor master data changes related to banking information are independently reviewed for accuracy of input and approved by authorized Inergi personnel based on SAP workflow.	No exceptions noted.

Control Objective 11: Controls provide reasonable assurance that invoices are authorized and processed completely and accurately.								
Description of Controls								
CA #	**Control Description**	**FS Assertion**	**Control Objective**	**Account**	**Control Type**	**Frequency**	**Testing of Operating Effectiveness**	**Results of Testing**
11.01	Invoices (Non-PO Invoices, Cheque Requisitions and Limit based PO invoices) entered into the SAP System are routed for approval by Inergi's client or authorized persons within Inergi, based on SAP workflow.	Valuation / Allocation, Existence / Occurrence	Validity	Accounts Payable	Automated	Event Driven	Inspected a sample of Non-PO Invoices, Invoices for Services and Cheque Requisitions created in SAP to determine whether they are approved by Inergi's client or authorized persons within Inergi as per SAP workflow. Inquired of Financial Services personnel to determine whether Non PO Invoices, Invoices for Services and Cheque Requisitions are approved by Inergi's client or authorized persons within Inergi based on SAP workflow.	No exceptions noted.
11.02	For limit based PO's, SAP performs a 2-way match between the accumulated invoice value and the PO value. If there is a mismatch exceeding the defined limit tolerances, the invoice is held in the system with a status	Valuation / Allocation, Existence / Occurrence	Accuracy, Validity	Accounts Payable	Automated	Event Driven	Observed on-line the attempt of entering a limit based PO invoice that cumulatively exceeded the PO value to determine whether it was held in SAP with a	No exceptions noted.

Control Objective 11: Controls provide reasonable assurance that invoices are authorized and processed completely and accurately.								
Description of Controls								
CA #	**Control Description**	**FS Assertion**	**Control Objective**	**Account**	**Control Type**	**Frequency**	**Testing of Operating Effectiveness**	**Results of Testing**
	that blocks for payment. The invoice cannot be released for payment until either the PO is modified by authorized personnel and resubmitted for approval or the invoice is cancelled and a new invoice is received from the supplier and approved by Inergi's client.						status that blocks for payment. Observed on-line the attempt of entering a limit based PO invoice that falls within the PO value to determine whether it was accepted in the system. Inquired of Financial Services personnel to determine whether: • For Limit Based PO invoices (for services), SAP performs a two-way match between the PO and the total of the invoices applied to the PO to date and if there is a mismatch exceeding the defined tolerances the invoice is held in the system with a status that blocks for payment. • The invoice cannot be released for payment until either	

Control Objective 11: **Controls provide reasonable assurance that invoices are authorized and processed completely and accurately.**								
Description of Controls								
CA #	**Control Description**	**FS Assertion**	**Control Objective**	**Account**	**Control Type**	**Frequency**	**Testing of Operating Effectiveness**	**Results of Testing**
							the PO is modified by authorized personnel and resubmitted for approval, or the invoice is cancelled and a new invoice is received from the supplier and approved by Inergi's client.	
11.03	For receipt based PO's, SAP performs a 3-way match between Invoice, PO and Receipt. If there is a mismatch in the price or quantity outside of the defined tolerances, the invoice is held in the system with a status that blocks for payment. The invoice cannot be released for payment until either the PO is modified by authorized personnel, approved and the invoice re-submitted, or the invoice is cancelled and a new invoice is received from the supplier, or the goods are received.	Valuation / Allocation, Existence / Occurrence	Accuracy, Validity	Accounts Payable	Automated	Event Driven	Observed on-line the attempt of entering a Receipt based PO Invoice that did not match quantity or price outside of the defined tolerances to determine whether it was held in SAP with a status that blocks for payment. Observed on-line the attempt of entering a Receipt based PO invoice that matches the quantity received and the price to determine whether it was approved and accepted in the system.	No exceptions noted.

Control Objective 11:
Controls provide reasonable assurance that invoices are authorized and processed completely and accurately.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
							Inquired of Financial Services personnel to determine whether: • For receipt-based PO's, SAP performs a three-way match between the Purchase Order, the Invoice and the Goods Receipted within SAP and if there is a mismatch in the price or quantity outside of the defined tolerances the invoice is held in the system with a status that blocks for payment. • The invoice cannot be released for payment until either the Purchase Order is modified by authorized personnel, approved and the invoice is re-submitted, or the invoice is cancelled and a new invoice	

Control Objective 11:
Controls provide reasonable assurance that invoices are authorized and processed completely and accurately.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
							is received from the supplier or the goods are received.	
11.04	Corporate Accounting posts Accounts Payable (AP) accrual journal entries on a monthly basis to account for invoices that are pending processing in SAP.	Completeness, Valuation / Allocation, Rights / Obligations	Completeness, Accuracy	Accounts Payable	Manual	Monthly	Inspected a sample of the AP accrual journal entries to determine whether the entries were posted accurately in SAP based on the SAP AP Parked Accrual Report. Inquired of Financial Services personnel to determine whether on a monthly basis AP accrual journal entries are posted in SAP based on the SAP AP Parked Accrual Report and a copy of these are provided to Inergi's client for their review.	No exceptions noted.
11.05	SAP provides a warning if a duplicate invoice or cheque requisition is to be processed.	Completeness, Existence / Occurrence	Completeness	Accounts Payable	Automated	Event Driven	Observed on-line an attempt of creating an invoice and/or cheque requisition in SAP to determine whether the system provided a warning that duplicate invoice and/or cheque	No exceptions noted.

Control Objective 11:
Controls provide reasonable assurance that invoices are authorized and processed completely and accurately.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
							requisition was being processed. Inquired of Financial Services personnel to determine whether: SAP provides a warning that a duplicate invoice and/or cheque requisition is being processed.	
11.06	SAP validates vendors against the SAP Vendor Master Database during invoice entry to determine that the vendor code used is active.	Existence / Occurrence, Rights / Obligations	Validity	Accounts Payable	Automated	Event Driven	Observed on-line the attempt of creating an invoice in SAP to determine whether the system only allowed the creation of an invoice for a vendor that existed in the Vendor Master file. Inquired of Financial Services personnel to determine whether SAP validates vendors against the SAP Vendor Master Database during invoice entry to determine that the vendor code used is active.	No exceptions noted.

Control Objective 11: Controls provide reasonable assurance that invoices are authorized and processed completely and accurately.								
Description of Controls								
CA #	**Control Description**	**FS Assertion**	**Control Objective**	**Account**	**Control Type**	**Frequency**	**Testing of Operating Effectiveness**	**Results of Testing**
11.07	Every month the Financial Supervisor, Accounts Payable receives an invoice from the bank and reconciles it to the MasterCard data uploaded in SAP. Differences are followed up and resolved by the Financial Supervisor, Accounts Payable.	Valuation / Allocation, Existence / Occurrence	Completeness, Accuracy	Accounts Payable	Manual	Monthly	Inspected a sample of monthly reconciliations performed by the Financial Supervisor, Accounts Payable to determine whether MasterCard Invoice data uploaded in SAP was reconciled with the bank invoice and that the differences are followed up and resolved. Inquired of Financial Services personnel to determine whether every month, the Financial Supervisor, Accounts Payable receives an invoice from the bank and reconciles it to the MasterCard data uploaded in SAP and that differences are followed up and resolved by the Financial Supervisor, Accounts Payable.	No exceptions noted.
11.08	On a periodic basis Inergi staff access to Invoice Entry and Invoice Approval, as provided by the roles, are reviewed for	Completeness, Valuation / Allocation,	Restricted Access	Accounts Payable	Manual	Quarterly	Inspected the supporting documentation for a sample of access reviews relating to	No exceptions noted.

Control Objective 11:
Controls provide reasonable assurance that invoices are authorized and processed completely and accurately.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
	appropriateness by Inergi management, based on data provided by Inergi's client. On a periodic basis, Inergi management conducts a review, based on data provided by Inergi's client, to determine that Inergi staff do not have conflicting roles to perform the following functions: • Purchase Order Processing • Invoice Processing • Payment Processing	Rights / Obligations, Existence / Occurrence					Invoice Entry and Invoice Approval, to determine whether the periodic review was performed for Inergi staff, and that staff access identified as being inappropriate was resolved. Inspected the supporting documentation for a sample of segregation of access reviews relating to Purchase Order Processing, Invoice Processing and Payment Processing, to determine whether the periodic review was performed for Inergi staff, and that staff access identified as having conflicts was appropriately resolved.	
							Inquired of Inergi management to determine whether: • Access to Invoice Entry and Invoice Approval for Inergi staff is reviewed on a periodic basis by	

Control Objective 11: Controls provide reasonable assurance that invoices are authorized and processed completely and accurately.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
							Inergi management; and • Segregation of access reviews over Purchase Order Processing, Invoice • Processing and Payment Processing, for Inergi staff is reviewed on a periodic basis by Inergi management.	
11.09	The SAP System applies processed invoices against their respective vendor account and updates supplier balances accordingly.	Completeness, Existence / Occurrence, Valuation / Allocation, Presentation / Disclosure	Completeness, Accuracy	Accounts Payable	Automated	Event Driven	Inspected a sample of invoices to determine whether the appropriate amount was applied to the supplier's balance in SAP correctly. Inquired of Financial Services personnel to determine whether the SAP System applies processed invoices against their respective vendor account and updates supplier balances accordingly.	No exceptions noted.

Control Objective 11:
Controls provide reasonable assurance that invoices are authorized and processed completely and accurately.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
11.10	SAP does not allow an individual to approve the same invoice that they entered.	Completeness Valuation / Allocation, Existence / Occurrence, Rights / Obligations	Restricted Access, Validity	Accounts Payable	Automated	Event Driven	Observed an individual attempting to approve an invoice that they entered, to determine whether this was prevented. Inquired of Inergi Management to determine whether the system prevented an individual who entered an Invoice from approving the same Invoice.	Exceptions noted.

Exceptions Noted:

11.10 – Testing in February 2016 indicated that SAP does not prevent an individual from approving the same invoice that they entered.

Control Objective 12:
Controls provide reasonable assurance that authorized payments are generated completely and accurately.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
12.01	For the period through to May 4, 2015, summary information from SAP cheque registers (i.e., first and last cheque numbers and cheque totals) is reconciled with the PayBase Batch Status Report on a daily basis. Effective May 5, 2015, summary information from SAP cheque registers (i.e., first and last cheque numbers and cheque totals) is reconciled with the SAP Cheque Print Status Page Report on a daily basis by the Payment and Quality Clerk.	Completeness, Valuation / Allocation	Completeness, Accuracy	Accounts Payable	Manual	Daily	For the period through to May 4, 2015, inspected a sample of SAP cheque registers and PayBase reconciliations to determine whether they were reconciled and that identified discrepancies were followed up by the Payment and Quality Clerk. Inquired of Financial Services personnel to determine whether summary information from SAP cheque registers (i.e., first and last cheque numbers and cheque totals) is reconciled with the PayBase Batch Status Report on a daily basis. Effective May 5, 2015, inspected a sample of SAP cheque registers and SAP Cheque Print Status Page Report reconciliations to	No exceptions noted.

Control Objective 12: **Controls provide reasonable assurance that authorized payments are generated completely and accurately.**

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
							determine whether they were reconciled and that identified discrepancies were followed up by the Payment and Quality Clerk. Inquired of Financial Services personnel to determine whether summary information from SAP cheque registers (i.e., first and last cheque numbers and cheque totals) is reconciled with the SAP Cheque Print Status Page Report on a daily basis.	
12.02	Paper jams are recorded on the Cheque Printing Log which is signed by the Accounting Services Clerk and the Payment and Quality Control Clerk (PQC).	Completeness	Completeness	Accounts Payable	Manual	Daily	Inspected a sample of Cheque Printing Logs to determine whether the Cheque Printing Log was reviewed and signed by the Payment and Quality Clerk on a daily basis. Inquired of Financial Services personnel to determine whether any	No exceptions noted.

Control Objective 12:
Controls provide reasonable assurance that authorized payments are generated completely and accurately.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
							paper jams are recorded on the Cheque Printing Log which is signed by the Accounting Services Clerk and the Payment and Quality Control Clerk (PQC).	
12.03	The PQC (Payment and Quality Control Clerk) and AP Supervisor review and sign off the Cheque Control Report/EFT Control Report for amounts greater than Cdn $100,000 (or US $75,000) and the Wire Transfer Report for all transfer amounts.	Valuation / Allocation, Rights / Obligations	Accuracy, Validity	Accounts Payable	Manual	Daily	Inspected a sample of EFT & Cheque Control Reports and Wire Transfer Reports to determine whether they were reviewed and approved by the Payment and Quality Clerk (PQC) and Accounts Payable Supervisor. Inquired of Financial Services personnel to determine whether the EFT and Cheque Control Report (for transactions above Cdn $100,000 or US $75,000), and Wire Transfer Report (for all transfers) is reviewed and approved by the Payment and Quality	No exceptions noted.

Control Objective 12:
Controls provide reasonable assurance that authorized payments are generated completely and accurately.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
							Control Clerk and Accounts Payable Supervisor.	
12.04	For the period through to May 4, 2015, the signature disk, cheque stationery and PayBase system password are kept locked in a cabinet in a secured cheque printing room together with the PayBase workstation. The keys to the cabinet and the printing room are kept by the Payment and Quality Control Clerk in Accounts Payable. Effective May 5, 2015 the cheque stationery is kept locked in a cabinet in a secured room. The keys to the cabinet and the secured room are kept by the Payment and Quality Control Clerk in Accounts Payable.	Completeness, Valuation / Allocation, Rights / Obligations, Existence / Occurrence	Restricted Access	Accounts Payable	Manual	Event Driven	For the period through to May 4, 2015, observed the cheque printing room to determine whether it was locked when not in use and keys remain with the Payment and Quality Control Clerk. Inquired of Financial Services personnel to determine whether the signature disk, cheque stationery and PayBase system password are kept locked in a cabinet in a secured cheque printing room together with the PayBase workstation and that the keys to the cabinet and the printing room are kept by the Payment and Quality Control Clerk in Accounts Payable.	No exceptions noted.

Control Objective 12:
Controls provide reasonable assurance that authorized payments are generated completely and accurately.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
							Effective May 5, 2015, observed the secured room within which the cheque stationery is maintained to determine whether it was locked when not in use and keys remain with the Payment and Quality Control Clerk. Inquired of Financial Services personnel to determine whether the cheque stationery are kept locked in a cabinet in a secured room and that the keys to the cabinet and the printing room are kept by the Payment and Quality Control Clerk in Accounts Payable.	
12.05	The Accounts Payable group generates a report which displays all exceptions (including Paid Exceptions, Paid No Issue and Payee Match Exceptions) from the bank's website each day. The Payment and Quality Control Clerk investigates and follows up	Completeness, Valuation / Allocation, Existence / Occurrence	Completeness, Accuracy, Validity	Accounts Payable	Manual	Daily	Inspected the exception report generated from the banks website for a sample of days for evidence of review and follow-up on exceptions by the Payment and	No exceptions noted.

Control Objective 12:
Controls provide reasonable assurance that authorized payments are generated completely and accurately.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
	on these exceptions on a daily basis. The Senior Financial Supervisor, Accounts Payable, performs an independent review of the exceptions reports and associated actions completed by the Payment and Quality Control Clerk.						Quality Control Clerk (PQC). Inquired of Financial Services personnel to determine whether Accounts Payable generates an exception report (including Paid Exceptions, Paid No Issue and Payee Match Exceptions) from the banks website each day and that the Payment and Quality Control Clerk investigates and follows up on these exceptions on a daily basis. Inspected a sample of exception reports generated to determine whether exception reports were signed off by the Accounts Payable Supervisor and where exceptions were reported by the bank, actions taken were either signed off by Accounts Payable	

Control Objective 12:
Controls provide reasonable assurance that authorized payments are generated completely and accurately.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
							Supervisor or Financial Services Manager.	
12.06	On a daily basis, the EFT Files Processing Report and Input Edit and Trace Report received from the bank are reviewed and compared to the decompressed EFT report and approved by both the Payment and Quality Control Clerk and by the Accounts Payable Supervisor.	Completeness, Valuation / Allocation, Existence / Occurrence	Completeness, Accuracy, Validity	Accounts Payable	Manual	Daily	Inspected a sample of EFT Files Processing Reports and Input Edit and Trace Reports to determine whether they were reviewed and approved by the Payment and Quality Control Clerk and Accounts Payable Supervisor. Inspected a sample of EFT File Processing Reports and Input Edit and Trace Reports and compared to the decompressed EFT report to determine whether total amounts match. Inquired of Financial Services personnel to determine whether on a daily basis, the EFT Files Processing Report and Input Edit and Trace Report received	No exceptions noted.

Control Objective 12:
Controls provide reasonable assurance that authorized payments are generated completely and accurately.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
							from the bank are reviewed and compared to the decompressed EFT report and approved by both the Payment and Quality Control Clerk and by the Accounts Payable Supervisor in Accounts Payable.	
12.07	On a weekly basis, the Duplicate Invoice Payment Report generated by SAP during the payment process is reviewed by the Accounting Services Clerk and any unusual items are investigated and resolved.	Completeness, Existence / Occurrence	Completeness	Accounts Payable	Manual	Weekly	Inspected a sample of Duplicate Invoice Payment reports generated by SAP to determine whether they were reviewed by the Accounting Services Clerk and whether duplicate invoices identified were followed up. Inquired of Financial Services personnel to determine whether on a weekly basis the Duplicate Invoice Payment Report generated by SAP during the payment	No exceptions noted.

Control Objective 12: **Controls provide reasonable assurance that authorized payments are generated completely and accurately.**

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
							process is reviewed by the Accounting Services Clerk and any unusual items are investigated and resolved.	
12.08	Bank reconciliations are prepared on a monthly basis by a member of the Accounts Analysis Group, for all Canadian and US$ bank accounts and the EFT Account. The reconciliations are approved by appropriate independent Inergi personnel as indicated in the Account Control Listing from Inergi's client. A copy of the reconciliation is provided to Inergi's client.	Completeness, Valuation / Allocation, Existence / Occurrence	Completeness, Accuracy, Validity	Accounts Payable	Manual	Monthly	Inspected a sample of monthly bank reconciliations (for all the AP Bank Accounts) to determine whether the accounts were accurately reconciled, whether the reconciliations were reviewed/approved by appropriate independent Inergi personnel as indicated in the Account Control Listing from Inergi's client, and whether a copy of the reconciliations were provided to Inergi's client. Inquired of Financial Services personnel to determine whether: • Bank reconciliations are prepared on a	No exceptions noted.

Control Objective 12: **Controls provide reasonable assurance that authorized payments are generated completely and accurately.**

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
							monthly basis by a member of the Accounts Analysis Group for all Canadian and US$ bank accounts and the EFT Accounts. • Appropriate independent Inergi personnel as indicated in the Account Control Listing from Inergi's client reviews/approves the reconciliations	
12.09	On a monthly basis, the Accounts Payable sub-ledger from SAP is reconciled with the SAP GL by a member of the Accounts Analysis Group. The reconciliation is approved by appropriate independent Inergi personnel as indicated in the Account Control Listing from Inergi's client. A copy of the reconciliation is provided to Inergi's client.	Completeness, Valuation / Allocation	Completeness, Accuracy	Accounts Payable	Manual	Monthly	Inspected a sample of Accounts Payable Sub-ledger and General Ledger monthly reconciliations to determine whether they were reconciled and reviewed/approved by appropriate independent Inergi personnel as indicated in the Account Control Listing from Inergi's client. Inquired of Financial Services personnel to	No exceptions noted.

Control Objective 12:
Controls provide reasonable assurance that authorized payments are generated completely and accurately.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
							determine whether on a monthly basis, the Accounts Payable Sub-ledger is reconciled with the GL by a member of the Accounts Analysis Group, and reviewed/approved by appropriate independent Inergi personnel as indicated in the Account Control Listing from Inergi's client, and that a copy of the reconciliation is provided to Inergi's client.	
12.10	On a monthly basis, the GR/IR account in SAP is reconciled to the SAP General Ledger accounts by a member of the Accounts Analysis Group, and approved by appropriate independent Inergi personnel as indicated in the Account Control Listing from Inergi's client. A copy of the reconciliation is provided to Inergi's client.	Completeness, Valuation / Allocation	Completeness, Accuracy	Accounts Payable	Manual	Monthly	Inspected a sample of GR/IR Sub-ledger and General Ledger monthly reconciliations to determine whether they were reconciled and reviewed/approved by appropriate independent Inergi personnel as indicated in the Account Control Listing from Inergi's client.	No exceptions noted.

Control Objective 12: Controls provide reasonable assurance that authorized payments are generated completely and accurately.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
							Inquired of Financial Services personnel to determine whether on a monthly basis, the GR/IR Sub-ledger account is reconciled with the General Ledger by a member of the Accounts Analysis Group, reviewed/approved by appropriate independent Inergi personnel as indicated in the Account Control Listing from Inergi's client, and that a copy of the reconciliation is provided to Inergi's client.	
12.11	For the period through to May 4, 2015, on a periodic basis Inergi staff access to the Payment Function, as provided by the roles, are reviewed for appropriateness by Inergi management, based on data provided by Inergi's client. Access to the PayBase cheque printing system is restricted to	Completeness, Valuation / Allocation, Rights / Obligations, Existence / Occurrence	Restricted Access	Accounts Payable	Manual	Quarterly	For the period through to May 4, 2015, inspected the supporting documentation for a sample of access reviews relating to the payment functions in SAP, to determine whether the periodic review was performed	No exceptions noted.

Control Objective 12: **Controls provide reasonable assurance that authorized payments are generated completely and accurately.**

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
	authorized Inergi Accounts Payable personnel. Effective May 5, 2015, on a periodic basis Inergi staff access to the Payment and Cheque Printing Functions in SAP, as provided by the roles, are reviewed for appropriateness by Inergi management, based on data provided by Inergi's client.						for Inergi staff, and that staff access identified as being inappropriate was resolved. Inspected the user access lists generated from the PayBase system and verified with the AP Supervisor to determine whether the user access was appropriate. Inquired of Inergi management to determine whether: • Access to the Payment function for Inergi staff is reviewed on a periodic basis by Inergi management; and • Access to PayBase cheque printing system is restricted to appropriate Inergi personnel. Effective May 5, 2015, inspected the supporting	

Control Objective 12:
Controls provide reasonable assurance that authorized payments are generated completely and accurately.

Description of Controls

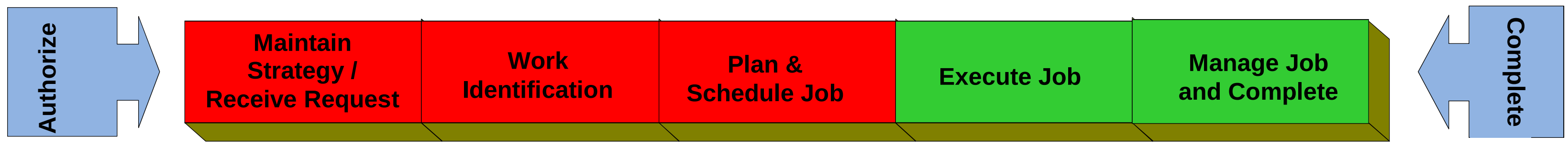
CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
							documentation for a sample of access reviews relating to the payment and cheque printing functions in SAP, to determine whether the periodic review was performed for Inergi staff, and that staff access identified as being inappropriate was resolved. Inquired of Inergi management to determine whether access to the payment and cheque printing functions in SAP for Inergi staff is reviewed on a periodic basis by Inergi management.	
12.12	The SAP System maintains an audit trail of the time and the person creating, approving and cancelling an invoice.	Completeness, Existence / Occurrence, Valuation / Allocation, Presentation / Disclosure	Completeness, Accuracy	Accounts Payable	Automated	Event Driven	Inspected a sample transaction to determine that SAP System maintains an audit trail of the time and the person creating, approving and cancelling an invoice.	No exceptions noted.

Control Objective 12:
Controls provide reasonable assurance that authorized payments are generated completely and accurately.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
							Inquired of Financial Services personnel to determine whether the SAP System maintains an audit trail of the time and the person creating, approving and cancelling an invoice.	

Authorize to Complete



In scope of Report

Out of scope of Report (Client Retained Procedures)

	Control Objective	Completeness	Accuracy	Validity	Restricted Access
Transaction	13) Projects	✓	✓	✓	✓
	14) Fixed Asset Purchases	✓	✓	✓	✓
	15) Fixed Asset Disposals	✓	✓	✓	✓
	16) Fixed Asset Depreciation	✓	✓	✓	✓
	17) Inventory	✓	✓	✓	✓

<u>Control Objectives</u>

- Completeness: All transactions that occurred are entered and accepted for processing
- Accuracy: Transactions are recorded at the correct amount, in the appropriate account, on a timely basis (in the proper period)
- Validity: All recorded transactions actually occurred (are real), relate to the organization, and were approved by designated personnel
- Restricted Access: Transaction processing and data is protected against unauthorized amendments, its confidentiality and physical assets are protected

Control Objective 13:
Controls provide reasonable assurance that authorized transactions related to projects are processed completely and accurately.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
13.01	The Cost Accounting Clerk, Asset Management sets up a Project ID in the SAP Project System (PS) module based on details provided by Inergi's client.	Existence / Occurrence	Validity	Construction in Progress Account	Manual	Event Driven	Inspected the documentation for a sample of projects created in the SAP Project System (PS) module to determine whether the projects created were authorized by Inergi's client. Inquired of Financial Services personnel to determine whether the Cost Accounting Clerk, Asset Management sets up a Project ID in the SAP PS module based on details provided by Inergi's client.	No exceptions noted.
13.02	The SAP Project System (PS) module generates a unique project number for each project created.	Completeness	Completeness	Construction in Progress Account	Automated	Event Driven	Observed the attempt of creating a new project with the existing project number in the SAP Project System (PS) module to determine whether the system prevents the number to be reused for the same business unit. Inquired of Financial Services personnel to	No exceptions noted.

Control Objective 13:
Controls provide reasonable assurance that authorized transactions related to projects are processed completely and accurately.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
							determine whether the SAP Project System module generates a unique ID for a combination of each project and business unit.	
13.03	The Cost Accounting Clerk, Asset Management updates the project's user status to "In Service" and the project's system status to 'Technically Complete (TECO)' in the SAP Project System module based on the Report of Equipment In Service (REIS) form received from Inergi's client.	Valuation, Existence / Occurrence	Validity	Construction in Progress Account, Capital Account	Manual	Event Driven	Inspected a sample of REIS forms for projects placed in user status 'In Service' and projects system status to 'Technically Complete (TECO)' to determine whether the status change was authorized by Inergi's client. Inquired of Financial Services personnel to determine whether the Cost Accounting Clerk, Asset Management updates the project's user status to "In Service" and the project's system status to 'Technically Complete (TECO)' in the SAP system based on the REIS (Report of Equipment In Service)	No exceptions noted.

Control Objective 13:
Controls provide reasonable assurance that authorized transactions related to projects are processed completely and accurately.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
							form received from Inergi's client.	
13.04	On a monthly basis, the Project System (PS) Assets Under Construction (AUC) Sub-ledger is reconciled to the General Ledger Asset Balance by a member of the Accounts Analysis Group, and approved by appropriate independent Inergi personnel as indicated in the Account Control Listing from Inergi's client. The reconciliation is provided to Inergi's client for approval.	Completeness, Valuation / Allocation, Existence / Occurrence	Completeness, Accuracy	Construction in Progress Account	Manual	Monthly	Inspected a sample of AUC Sub-ledger to General Ledger reconciliations to determine whether the reconciliations are conducted and reviewed/approved by appropriate independent Inergi personnel as indicated in the Account Control Listing from Inergi's client, and that discrepancies were identified and investigated. Inquired of Financial Services personnel to determine whether on a monthly basis, the AUC Sub-ledger to General Ledger reconciliations are completed by a member of the Accounts Analysis Group, reviewed/approved by appropriate independent Inergi personnel as indicated in the Account	No exceptions noted.

Control Objective 13:
Controls provide reasonable assurance that authorized transactions related to projects are processed completely and accurately.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
							Control Listing from Inergi's client, and a copy is provided to Inergi's client for approval.	
13.05	On a quarterly basis, General Accounting updates interest and overhead rates to be charged based on approval received from Inergi's client.	Valuation/ Allocation	Validity	Construction in Progress Account, Capital Account	Manual	Quarterly	Inspected the request for updates of interest and overhead rates to determine whether the request was approved by Inergi's client. Observed on-line to determine whether interest and overhead rates had been appropriately updated. Inquired of Financial Services personnel to determine whether on a quarterly basis, General Accounting updates interest and overhead rates to be charged based on approval received from Inergi's client.	No exceptions noted.
13.06	On a periodic basis Inergi staff access to set up or maintain project information within	Completeness, Valuation / Allocation,	Restricted Access	Construction in Progress Account,	Manual	Quarterly	Inspected the supporting documentation for a sample of access	No exceptions noted.

Control Objective 13:
Controls provide reasonable assurance that authorized transactions related to projects are processed completely and accurately.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
	SAP, as provided by the roles, are reviewed for appropriateness by Inergi management, based on data provided by Inergi's client. On a periodic basis Inergi staff access to maintain interest and overhead rates within SAP, as provided by the roles, are reviewed for appropriateness by Inergi management, based on data provided by Inergi's client.	Existence / Occurrence, Rights / Obligations		Capital Account			reviews relating to set up or maintain project information within SAP, to determine whether the periodic review was performed for Inergi staff, and that staff access identified as being inappropriate was resolved. Inspected the supporting documentation for a sample of access reviews relating to access to maintain interest and overheads within SAP, to determine whether the periodic review was performed for Inergi staff, and that staff access identified as being inappropriate was resolved. Inquired of Inergi management to determine whether: • Access to set up or maintain project information within	

Control Objective 13: **Controls provide reasonable assurance that authorized transactions related to projects are processed completely and accurately.**								
Description of Controls								
CA #	**Control Description**	**FS Assertion**	**Control Objective**	**Account**	**Control Type**	**Frequency**	**Testing of Operating Effectiveness**	**Results of Testing**
							SAP for Inergi staff is reviewed on a periodic basis by Inergi management; and • Access to maintain interest and overheads within SAP for Inergi staff is reviewed on a periodic basis by Inergi management.	
13.07	Internal Settlement Error Reports identifying WBS costs that are not allocated to AUC are monitored on a weekly basis and errors are followed up appropriately. External Settlement Error Reports identifying costs that are not transferred from AUC to Fixed Asset or General Ledger when the status is set to "In Service" are monitored on a weekly basis and errors are followed up appropriately.	Valuation / Allocation	Accuracy, Validity	Construction in Progress Account, Capital Account	Manual	Weekly	Inspected a sample of weekly Internal and External settlement batch job error report logs to determine whether they were reviewed for errors and errors were followed up appropriately Inquired of Financial Services personnel to determine whether the weekly Internal and External settlement batch jobs run according to schedule and that the batch job error report logs are reviewed and errors appropriately	No exceptions noted.

Control Objective 13: Controls provide reasonable assurance that authorized transactions related to projects are processed completely and accurately.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
							followed up internally or with the assistance of Inergi's client.	
13.08	The SAP Project Systems module automatically calculates interest and overhead costs.	Valuation / Allocation	Accuracy, Validity	Construction in Progress Account, Capital Account	Automated	Event Driven	Reperformed the interest and overhead cost calculation for a sample of projects to determine whether the calculation is accurate. Inquired of Inergi Management to determine whether the SAP Project Systems module automatically calculates interest and overhead costs.	No exceptions noted.

Control Objective 14: **Controls provide reasonable assurance that fixed asset purchases and capitalizations are authorized and processed completely and accurately.**

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
14.01	For minor fixed asset related purchase requisitions where the asset class was not assigned in the requisition, the transactions are posted manually by the AP Clerk to the Fixed Asset suspense account based on the account assignment defined on the PO and invoice. The assets are then manually capitalized or expensed based on guidance from Inergi's client. On a monthly basis, balances in the asset suspense accounts are forwarded to Inergi's client. For minor fixed asset related purchase requisitions where the asset class was assigned in the requisition, the transactions are posted automatically to the appropriate minor fixed asset GL account.	Completeness, Existence / Occurrence, Valuation / Allocation	Completeness, Accuracy	Capital Account, Depreciation Expense, Accumulated Depreciation, Expenses	Automated / Manual	Event Driven	Manual postings Inspected a sample of manual postings to the fixed asset suspense account to determine whether these were done according to the account assignment defined on the PO and/or invoice. Inspected a sample of items manually cleared from the suspense account to determine whether they were appropriately capitalized or expensed based on guidance from Inergi's client. Inquired of the Financial services personnel to determine whether the minor fixed assets are manually posted to the suspense account based on the account assignment identified, and that the suspense account is cleared based	No exceptions noted.

Control Objective 14: **Controls provide reasonable assurance that fixed asset purchases and capitalizations are authorized and processed completely and accurately.**

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
							on guidance from Inergi's client. **Automated postings** Inspected a sample of minor fixed asset related invoices to determine whether these were posted to the appropriate GL account based on the assigned asset class specified on the corresponding purchase order and purchase requisition. Inquired of Financial services personnel to determine whether minor fixed asset transactions are automatically posted to the appropriate GL account based on the asset class assigned in the corresponding purchase requisition.	
14.02	Projects get capitalized based on Settlement rules defined within the project. This is executed via weekly settlement batch jobs. The batch job log	Completeness, Existence / Occurrence, Valuation / Allocation	Completeness, Accuracy	Capital Account, Depreciation Expense,	Manual	Weekly	Inspected a sample of External settlement batch job error report logs to determine whether they were reviewed for errors	No exceptions noted.

Control Objective 14: Controls provide reasonable assurance that fixed asset purchases and capitalizations are authorized and processed completely and accurately.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
	error report is monitored by the Financial Analyst, Asset Management and errors are followed up appropriately.			Accumulated Depreciation			and errors were followed up appropriately. Inquired of Asset Management personnel to determine whether the External settlement batch job runs, where projects get capitalized based on Settlement rules, according to schedule and that the batch job error report logs are reviewed and errors appropriately followed up internally or with the assistance of Inergi's client.	
14.03	For minor fixed assets a monthly reconciliation of entries in the suspense account is prepared by a member of the Accounts Analysis Group and approved by appropriate independent Inergi personnel as indicated in the Account Control Listing from Inergi's client. The reconciliation is forwarded to Inergi's client for approval.	Completeness, Valuation / Allocation	Completeness, Accuracy	Asset Suspense Accounts	Manual	Monthly	Inspected a sample of the minor fixed assets monthly reconciliations to determine whether these were reviewed/approved by appropriate independent Inergi personnel as indicated in the Account Control Listing from Inergi's client. Inquired of Financial Services personnel to	No exceptions noted.

Control Objective 14:
Controls provide reasonable assurance that fixed asset purchases and capitalizations are authorized and processed completely and accurately.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
							determine whether on a monthly basis, the fixed asset suspense account is reconciled and these reconciliations are prepared by a member of the Accounts Analysis Group and reviewed/approved by appropriate independent Inergi personnel as indicated in the Account Control Listing from Inergi's client, and provided to Inergi's client for approval.	
14.04	The Fixed Assets Sub- ledger is reconciled to the SAP General Ledger Balances by a member of the Accounts Analysis Group on a monthly basis. This reconciliation includes all the capital accounts and accumulated depreciation accounts. The reconciliation is approved by appropriate independent Inergi personnel as indicated in the Account Control Listing from Inergi's client and provided to Inergi's client on a quarterly basis.	Completeness, Valuation / Allocation, Existence / Occurrence	Completeness, Accuracy, Validity	Capital Account, Depreciation Expense, Accumulated Depreciation Expense	Manual	Monthly	Inspected a sample of reconciliations performed during the period under test to determine whether the reconciliations were prepared, identified discrepancies were followed up, and the reconciliations were reviewed/approved by appropriate independent Inergi personnel as indicated in the Account Control Listing from Inergi's client.	No exceptions noted.

Control Objective 14: **Controls provide reasonable assurance that fixed asset purchases and capitalizations are authorized and processed completely and accurately.**								
Description of Controls								
CA #	**Control Description**	**FS Assertion**	**Control Objective**	**Account**	**Control Type**	**Frequency**	**Testing of Operating Effectiveness**	**Results of Testing**
							Inquired with Financial Services personnel to determine whether the Fixed Assets Sub-ledger is reconciled to the SAP General Ledger Balances by a member of the Accounts Analysis Group, that this reconciliation includes all the capital accounts and accumulated depreciation accounts and that the reconciliation is reviewed/approved by appropriate independent Inergi personnel as indicated in the Account Control Listing from Inergi's client and provided to Inergi's client on a quarterly basis.	
14.05	On a periodic basis Inergi staff access to set up or maintain fixed asset master data within SAP, as provided by the roles, are reviewed for appropriateness by Inergi	Completeness, Valuation / Allocation, Existence / Occurrence, Rights / Obligations	Restricted Access	Capital Accounts, Suspense Accounts	Manual	Quarterly	Inspected the supporting documentation for a sample of access reviews relating to set up or maintain fixed asset master data within SAP, to determine whether the	No exceptions noted.

Control Objective 14:
Controls provide reasonable assurance that fixed asset purchases and capitalizations are authorized and processed completely and accurately.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
	management, based on data provided by Inergi's client.						periodic review was performed for Inergi staff, and that staff access identified as being inappropriate was resolved. Inquired of Inergi management to determine whether access to set up or maintain fixed asset master data within SAP for Inergi staff is reviewed on a periodic basis by Inergi management.	

Control Objective 14:
Controls provide reasonable assurance that fixed asset purchases and capitalizations are authorized and processed completely and accurately.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
14.06	On a periodic basis access to run the capitalization batch job within SAP, as provided by the roles, are reviewed for appropriateness by Inergi management, based on data provided by Inergi's client.	Completeness, Valuation / Allocation, Existence / Occurrence, Rights / Obligations	Restricted Access	Capital Accounts, Suspense Accounts	Manual	Quarterly	Inspected the supporting documentation for a sample of access reviews relating to access to run the capitalization batch job within SAP, to determine whether the periodic review was performed for Inergi staff, and that staff access identified as being inappropriate was resolved. Inquired of Inergi management to determine whether access to run the capitalization batch job within SAP for Inergi staff is reviewed on a periodic basis by Inergi management.	No exceptions noted.

Control Objective 15:
Controls provide reasonable assurance that fixed asset disposals are authorized and processed completely and accurately.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
15.01	The Asset Management group processes the sale of assets in SAP based on authorized requests from Inergi's client, except in the case of accumulated scrap material sales for which sales transaction details are based on the results of a formal tendering process.	Valuation / Allocation, Rights / Obligations	Validity	Capital Account, Capital Gain or Loss Account	Manual	Event Driven	Inspected a sample of fixed assets sales to determine whether the approval for Inergi's client was received before selling the asset or there is evidence of tendering in the case of accumulated scrap material sales. Inquired of Financial Services personnel to determine whether the Asset Management group processes the sale of assets in SAP based on authorized requests from Inergi's client and in the case of accumulated scrap material sales, it is based on the results of a tendering process.	No exceptions noted.

Control Objective 15: **Controls provide reasonable assurance that fixed asset disposals are authorized and processed completely and accurately.**								
Description of Controls								
CA #	**Control Description**	**FS Assertion**	**Control Objective**	**Account**	**Control Type**	**Frequency**	**Testing of Operating Effectiveness**	**Results of Testing**
15.02	On a monthly basis, movement in the Sale of Fixed Assets Proceeds Suspense Account in SAP is reconciled by a member of the Accounts Analysis Group and approved by appropriate independent Inergi personnel as indicated in the Account Control Listing from Inergi's client.	Valuation / Allocation, Rights / Obligations	Completeness, Accuracy, Validity	Capital Account, Capital Gain or Loss Account	Manual	Monthly	Inspected a sample of the reviews performed for the Sales of Fixed Assets Proceeds Suspense Account to determine whether the account was reviewed/approved by appropriate independent Inergi personnel as indicated in the Account Control Listing from Inergi's client, and discrepancies were followed up. Inquired of Financial Services personnel to determine whether on a monthly basis, movement in the Sale of Fixed Assets Proceeds Suspense Account in SAP are reconciled by a member of the Accounts Analysis Group and reviewed/approved by appropriate independent Inergi personnel as indicated in the Account Control Listing from Inergi's client.	No exceptions noted.

Control Objective 15: **Controls provide reasonable assurance that fixed asset disposals are authorized and processed completely and accurately.**								
Description of Controls								
CA #	**Control Description**	**FS Assertion**	**Control Objective**	**Account**	**Control Type**	**Frequency**	**Testing of Operating Effectiveness**	**Results of Testing**
15.03	The Cost Accounting Clerk, Asset Management posts sales and retirements related to Transportation and Work Equipment (TWE) into the Asset Accounting module, based on an Auction Report for revenue-based retirements/sales or surplus declaration form for non-revenue based retirements/sales received from the Inergi's client Fleet Asset Management Services, Group, approved by Inergi's client. A report of TWE sales is generated from SAP Asset Accounting module and provided to Inergi's client's Fleet Asset Management Services Manager and Supply Chain Services Department.	Completeness, Valuation / Allocation, Existence / Occurrence	Validity	Capital Account, Capital Gain or Loss Account	Manual	Event Driven	Inspected a sample of Transportation and Work Equipment (TWE) retirements posted in the Asset Accounting module to determine whether the sales and retirements authorization was received from Inergi's client. Inquired of Financial Services personnel to determine whether the Cost Accounting Clerk, Asset Management posts the retirements related to Transportation and Work Equipment (TWE) into the SAP Asset Accounting module based on an Auction Report for revenue-based retirements/sales or surplus declaration form for non-revenue based retirements/sales received from the Inergi's client's Fleet Asset Management Services Group, which is	No exceptions noted.

Control Objective 15:
Controls provide reasonable assurance that fixed asset disposals are authorized and processed completely and accurately.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
							approved by Inergi's client.	
15.04	The Cost Accounting Clerk, Asset Management posts the minor fixed assets retirements, excluding Transportation and Work Equipment (TWE) based on details provided by Inergi's client.	Valuation / Allocation, Existence / Occurrence	Validity	Capital Account, Capital Gain or Loss Account	Manual	Event Driven	Inspected details provided by Inergi's client to determine whether Inergi's client approval was obtained prior to the posting of these retirements for minor fixed assets, excluding Transportation and Work Equipment (TWE). Inquired of Financial Services personnel to determine whether minor fixed assets retirements, excluding Transportation and Work Equipment (TWE) are entered by Inergi based on details received from Inergi's client.	No exceptions noted.
15.05	Major fixed assets retirement adjustments are processed by Inergi based on the request received from Inergi's client via SAP work flow or email.	Valuation / Allocation, Existence / Occurrence	Validity	Capital Account, Capital Gain or Loss Account	Manual	Event Driven	Inspected a sample of Major Retirements to determine whether they were processed based on the request received from Inergi's client via SAP work flow or email.	No exceptions noted.

Control Objective 15:
Controls provide reasonable assurance that fixed asset disposals are authorized and processed completely and accurately.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
							Inquired of Financial Services personnel to determine whether major fixed assets retirement adjustments are processed by Inergi based on the request received from Inergi's client via SAP work flow or email.	
15.06	The SAP system calculates gains / losses on the sale of assets based on the net book value at the time of the sale.	Valuation / Allocation, Existence / Occurrence	Accuracy	Capital Account, Capital Gain or Loss Account	Automated	Event Drive	Inspected a sample of fixed asset sales that generated a gain or loss to determine whether the SAP system calculated gains / losses on the sale of assets based on the net book value at the time of the sale. Inquired of Financial Services personnel to determine whether the SAP system calculates gains / losses on the sale of assets based on the net book value at the time of the sale.	No exceptions noted.

Control Objective 15:
Controls provide reasonable assurance that fixed asset disposals are authorized and processed completely and accurately.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
15.07	On a periodic basis Inergi staff access to process asset retirements and/or sales within SAP, as provided by the roles, are reviewed for appropriateness by Inergi management, based on data provided by Inergi's client.	Completeness, Valuation / Allocation, Existence / Occurrence, Rights / Obligations	Restricted Access	Capital Accounts, Suspense Accounts	Manual	Quarterly	Inspected the supporting documentation for a sample of access reviews relating to access to process asset retirements and/or sales within SAP, to determine whether the periodic review was performed for Inergi staff and that staff access identified as being inappropriate was resolved. Inquired of Inergi management to determine whether access to process asset retirements and/or sales within SAP for Inergi staff is reviewed on a periodic basis by Inergi management.	No exceptions noted.

Control Objective 16:
Controls provide reasonable assurance that fixed asset depreciation is calculated completely and accurately.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
16.01	On a monthly basis, the Financial Analyst, Asset Management executes the final depreciation run in SAP and reviews for reasonability by comparing the results with the previous month's charge. Unusual fluctuations are investigated.	Completeness, Valuation / Allocation	Completeness, Accuracy	Capital Account, Accumulated Depreciation, Depreciation Expense	Manual	Monthly	Inquired of the Financial Analyst, Asset Management to determine whether the depreciation expense is reviewed for reasonability every month and that unusual fluctuations are investigated and resolved. Inspected a sample of the month-end depreciation analysis to determine whether the depreciation accounts are reviewed on a monthly basis for reasonability, and whether unusual fluctuations are investigated and resolved.	No exceptions noted.
16.02	The Fixed Assets Sub- ledger is reconciled to the SAP General Ledger Balances a member of the Accounts Analysis Group on a monthly basis. This reconciliation includes all the capital accounts and accumulated	Completeness, Valuation / Allocation, Existence / Occurrence	Completeness, Accuracy, Validity	Capital Account, Depreciation Expense, Accumulated Depreciation Expense	Manual	Quarterly	Inspected a sample of reconciliations performed during the period under test to determine whether identified discrepancies were followed up and the reconciliations were	No exceptions noted.

Control Objective 16: **Controls provide reasonable assurance that fixed asset depreciation is calculated completely and accurately.**

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
	depreciation accounts. The reconciliation is approved by appropriate independent Inergi personnel as indicated in the Account Control Listing from Inergi's client, and provided to Inergi's client for approval.						reviewed/approved by appropriate independent Inergi personnel as indicated in the Account Control Listing from Inergi's client. Inquired with Financial Services personnel to determine whether the Fixed Assets Sub-ledger is reconciled to the SAP General Ledger Balances by a member of the Accounts Analysis Group, that this reconciliation includes all the capital accounts and accumulated depreciation accounts and that the reconciliation is reviewed/approved by appropriate independent Inergi personnel as indicated in the Account Control Listing from Inergi's client and provided to Inergi's client for approval.	

Control Objective 16:
Controls provide reasonable assurance that fixed asset depreciation is calculated completely and accurately.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Contro l Type	Frequency	Testing of Operating Effectiveness	Results of Testing
16.03	The SAP Asset Management system continues to keep assets in the asset management ledger even if they are fully depreciated.	Valuation / Allocation, Existence / Occurrence	Accuracy	Capital Account, Capital Gain or Loss Account	Automat ed	Event Driven	Inspected a sample of fixed asset which have been fully depreciated to determine whether the assets remain in the asset management ledger even if they are fully depreciated. Inquired of Financial Services personnel to determine whether the SAP Asset Management system continues to keep assets in the asset management ledger even if they are fully depreciated.	No exceptions noted.
16.04	On a periodic basis Inergi staff access to set up or maintain fixed asset master data within SAP, as provided by the roles, are reviewed for appropriateness by Inergi management, based on data provided by Inergi's client.	Completeness, Valuation / Allocation, Existence / Occurrence, Rights / Obligations	Restricted Access	Capital Accounts, Suspense Accounts, Depreciation Expense, Accumulated Depreciation	Manual	Quarterly	Inspected the supporting documentation for a sample of access reviews relating to set up or maintain fixed asset master data within SAP, to determine whether the periodic review was performed for Inergi staff, and that staff access identified as being inappropriate was resolved.	No exceptions noted.

Control Objective 16:
Controls provide reasonable assurance that fixed asset depreciation is calculated completely and accurately.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Contro l Type	Frequency	Testing of Operating Effectiveness	Results of Testing
							Inquired of Inergi management to determine whether access to set up or maintain fixed asset master data within SAP for Inergi staff is reviewed on a periodic basis by Inergi management.	
16.05	SAP calculates depreciation based on the asset class assigned to the asset.	Completeness, Existence / Occurrence, Valuation / Allocation, Presentation / Disclosure	Completeness, Accuracy	Capital Accounts, Suspense Accounts, Depreciation Expense, Accumulated Depreciation	Automat ed	Event Driven	Reperformed the depreciation expense calculations for a sample of assets with different asset classes to determine whether the system calculates depreciation according to the assigned asset class and depreciation key rate. Inquired of Financial Services personnel to determine whether the SAP Asset Management system calculates depreciation based on the assigned asset class and depreciation key rate.	No exceptions noted.

Control Objective 17:
Controls provide reasonable assurance that material and supplies inventory transactions are accounted for completely and accurately.

Description of Controls								
CA #	**Control Description**	**FS Assertion**	**Control Objective**	**Account**	**Control Type**	**Frequency**	**Testing of Operating Effectiveness**	**Results of Testing**
17.01	Manual adjustments made by Inergi personnel to the average unit price (AUP) for stock items are authorized by Inergi's client.	Existence / Occurrence	Validity	Inventory	Manual	Event Driven	Inspected a sample of changes made to the Average Unit Price to determine whether they were approved by Inergi's client. Inquired of SMS personnel to determine whether any required changes to SAP to correct unit cost data are authorized by Inergi's client.	No exceptions noted.
17.02	On a monthly basis, a member of the Accounts Analysis Group reconciles the inventory value in the SAP Sub-ledger with the inventory balance in the SAP General Ledger. The reconciliation is approved by appropriate independent Inergi personnel as indicated in the Account Control Listing from Inergi's client and provided to Inergi's client.	Completeness, Valuation / Allocation, Existence / Occurrence	Completeness, Accuracy	Inventory	Manual	Monthly	Inspected a sample of Inventory Sub-ledger and General Ledger monthly reconciliations to determine whether they were reconciled and reviewed/approved by appropriate independent Inergi personnel as indicated in the Account Control Listing from Inergi's client. Inquired of Financial Services personnel to determine whether on a monthly basis, a member	No exceptions noted.

Control Objective 17:
Controls provide reasonable assurance that material and supplies inventory transactions are accounted for completely and accurately.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
							of the Accounts Analysis Group reconciles the inventory value in the SAP Sub-ledger with the inventory balance in the General Ledger and that the reconciliation is reviewed/approved by appropriate independent Inergi personnel as indicated in the Account Control Listing from Inergi's client, and is provided to Inergi's client.	
17.03	On a periodic basis Inergi staff access to update the Material Master, as provided by the roles, are reviewed for appropriateness by Inergi management, based on data provided by Inergi's client.	Completeness, Valuation / Allocation, Existence / Occurrence, Rights / Obligations	Restricted Access	Inventory	Manual	Quarterly	Inspected the supporting documentation for a sample of access reviews relating to Material Master maintenance in SAP, to determine whether the periodic review was performed for Inergi staff, and that staff access identified as being inappropriate was resolved. Inquired of Inergi management to determine whether access	No exceptions noted.

Control Objective 17:
Controls provide reasonable assurance that material and supplies inventory transactions are accounted for completely and accurately.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
							to update the Material Master, is reviewed on a periodic basis by Inergi management.	
17.04	The SAP System updates inventory quantities for receipts and issues of goods and posts the value of the transaction to the General Ledger.	Completeness, Existence / Occurrence, Valuation / Allocation, Presentation / Disclosure	Completeness, Accuracy	Capital Accounts, Suspense Accounts, Depreciation Expense, Accumulated Depreciation	Automated	Event Driven	Inspected a sample of material requisitions to determine whether SAP appropriately updated the inventory quantities and transaction values for receipt and issuance of goods, into the General Ledger. Inquired of SMS personnel to determine whether the SAP System updates inventory quantities for receipts and issues of goods and posts the value of the transaction to the General Ledger.	No exceptions noted.

Hire to Pay

In scope of Report

Out of scope of Report (Client Retained Procedures)

	Control Objective	Completeness	Accuracy	Validity	Restricted Access
Transaction	18) Payroll	✓	✓	✓	✓

<u>Control Objectives</u>

- Completeness: All transactions that occurred are entered and accepted for processing
- Accuracy: Transactions are recorded at the correct amount, in the appropriate account, on a timely basis (in the proper period)
- Validity: All recorded transactions actually occurred (are real), relate to the organization, and were approved by designated personnel
- Restricted Access: Transaction processing and data is protected against unauthorized amendments, its confidentiality and physical assets are protected

Control Objective 18:
Controls provide reasonable assurance that payroll transactions are authorized and accounted for completely and accurately.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
18.01	Only Inergi's client authorized employee data can be entered in the SAP Employee Master file. For new hires, an authorized New Hire Package is required from Inergi's client. For other types of changes (i.e., salary rates, department), an authorized change request is required from Inergi's client.	Existence / Occurrence	Validity	Payroll	Manual	Event Driven	Inspected a sample of new hires created in the SAP Employee Master file and traced them back to the approved New Hire Package received from Inergi's client to determine whether new hires created in the Employee Master file were approved by Inergi's client. Inspected a sample of changes made to the SAP Employee Master file and traced them back to the approved change requests from Inergi's client to determine whether changes were approved by Inergi's client. Inquired of Payroll personnel to determine whether only Inergi's client authorized employee data can be	No exceptions noted.

Control Objective 18:
Controls provide reasonable assurance that payroll transactions are authorized and accounted for completely and accurately.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
							entered in the SAP Employee Master file and that for new hires, an authorized New Hire Package is required from Inergi's client and for other types of changes (i.e., salary rates, department) an authorized change request is required from Inergi's client.	
18.02	Changes to the SAP Employee Master file affecting Inergi's client's employees pay, benefits or entitlements, including new hires, are performed based on requests by Inergi's client. Changes other than those received via interactive forms are performed by the Pay Services team, and are verified and signed off by a member of the Pay Services team. Manual changes are verified by an independent member of the Pay Services Team.	Completeness, Existence / Occurrence, Valuation / Allocation	Completeness, Accuracy, Validity	Payroll	Manual	Event Driven	Inspected a sample of changes performed to the Employee Master file affecting Inergi's client's employees pay, benefits or entitlements, including new hires, to determine whether they were performed by pay services based on requests by Inergi's client. Inspected whether manually entered changes were verified	No exceptions noted.

Control Objective 18:
Controls provide reasonable assurance that payroll transactions are authorized and accounted for completely and accurately.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
	Discrepancies are identified and resolved.						and signed off by an independent member of the Pay Services team, whether the batch uploads were verified by a member of the Pay Services team, and whether discrepancies were identified and resolved. Inquired of Pay Services personnel to determine whether changes to the SAP Employee Master file affecting Inergi's client's employees pay, benefits or entitlements, including new hires, are performed based on requests by Inergi's client. Inquired of Pay Services personnel to determine whether manually entered changes by the Pay	

Control Objective 18:
Controls provide reasonable assurance that payroll transactions are authorized and accounted for completely and accurately.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
							Services team, are verified and signed off by an independent member of the Pay Services team, whether changes entered through batch uploads are verified by a member of the Pay Services team,, and discrepancies identified are resolved.	
18.03	On a periodic basis Inergi staff access to maintain employee master data for Inergi's client's employees within SAP, including access to maintain special allowances, as provided by the roles, are reviewed for appropriateness by Inergi management, based on data provided by Inergi's client.	Completeness, Existence / Occurrence, Valuation / Allocation	Restricted Access	Payroll	Manual	Quarterly	Inspected the supporting documentation for a sample of access reviews relating to access to maintain employee master data within SAP, to determine whether the periodic review was performed for Inergi staff, and that staff access identified as being inappropriate was resolved.	No exceptions noted.

Control Objective 18:
Controls provide reasonable assurance that payroll transactions are authorized and accounted for completely and accurately.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
							Inquired of Inergi management to determine whether: • Access to maintain employee master data within SAP for Inergi staff is reviewed on a periodic basis by Inergi management; and • Segregation of access reviews over employee master data maintenance, and processing of special allowances, for Inergi staff is reviewed on a periodic basis by Inergi management.	
18.04	Board & Travel allowances for casual trade employees are entered into the Pay system weekly by Inergi Pay based	Completeness, Existence / Occurrence, Valuation / Allocation	Completeness, Accuracy	Payroll	Manual	Weekly	Inspected a sample of weekly Board & Travel allowances for casual trade employees, to	No exceptions noted.

Control Objective 18:
Controls provide reasonable assurance that payroll transactions are authorized and accounted for completely and accurately.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
	on information provided by Inergi's client. For allowance files uploaded into SAP, Payroll Services reviews SAP generated error reports and takes corrective action. For manually entered allowances into SAP, an independent Payroll Specialist reviews the manual entries for accuracy of input. Prior to confirmation of the Final Pay Run, the Pay Register report cover sheet ('control sheet') which includes Board & Travel allowances is signed off by the Payroll Specialist after the independent review.						determine whether the Board & Travel allowances uploaded into SAP were reviewed by the Inergi Pay Team for upload without error, and corrective action was taken when errors occurred; and that manually entered allowances were reviewed for accuracy of input into SAP by an independent Payroll Specialist, and prior to confirmation of the pay run the corresponding Pay Register report cover sheet ('control sheet') was signed off by the Payroll Specialist as evidence of their independent review. Inquired of Payroll personnel to determine whether Board & Travel allowances for casual trade employees	

Control Objective 18: Controls provide reasonable assurance that payroll transactions are authorized and accounted for completely and accurately.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
							are entered into the Pay system weekly by Inergi Pay based on information provided by Inergi's client. For allowance files uploaded into SAP, Payroll Services reviews SAP generated error reports and takes corrective action. For manually entered allowances into SAP, an independent Payroll Specialist reviews the manual entries for accuracy of input. Prior to confirmation of the Final Pay Run, the Pay Register report cover sheet ('control sheet') is signed off by the Payroll Specialist, as evidence of their independent review prior to the pay run.	

Control Objective 18:
Controls provide reasonable assurance that payroll transactions are authorized and accounted for completely and accurately.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
18.05	Special allowances processed in SAP are based on requests received from Inergi's client. A member of the Payroll Services team verifies whether the special allowance processed is accurate by comparing the amount processed with the request received from Inergi's client. Manual changes are verified by an independent member of the Payroll Services Team.	Existence / Occurrence, Valuation / Allocation	Validity	Payroll	Manual	Event Driven	Inspected a sample of special allowances entered into the SAP system to determine whether they were processed based on a request from Inergi's client, whether an independent member of the Payroll Services team verified the accuracy of the amount processed for manual changes, and whether allowances entered through batch uploads were verified by a member of the Payroll Services team. Inquired of Payroll personnel to determine whether only requests received from Inergi's client related to special allowances are entered into the SAP system, whether manually entered allowances are verified to the original request from Inergi's	No exceptions noted.

Control Objective 18:
Controls provide reasonable assurance that payroll transactions are authorized and accounted for completely and accurately.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
							client by an independent member of the Payroll Services team during processing, and whether the batch uploads are verified by a member of the Payroll Services team..	
18.06	Following each pay run, Payroll Services performs a check to review and investigate any SAP generated error reports (e.g. queries defined over negative net pay, employees on maternity leave with pension plan deduction, missing TD1 tax information). Warnings and corrections are reviewed and corrective action is taken where appropriate. Verification procedures are performed using a set of predefined queries including pay amounts, earnings code, tax wage loss plans, etc. The Pay Specialist, Payroll Services reviews exception reports and verifies	Existence / Occurrence, Valuation / Allocation	Completeness, Accuracy Validity	Payroll	Manual	Weekly	Inspected a sample of SAP generated error reports from the pay runs to determine whether errors are cleared before the pay is confirmed. Inquired of Payroll personnel to determine whether the errors are cleared before the pay is confirmed.	No exceptions noted.

Control Objective 18:
Controls provide reasonable assurance that payroll transactions are authorized and accounted for completely and accurately.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
	exceptions against source documents or through Inergi's client contact as required prior to each pay run.							
18.07	On a weekly basis, a query report is generated and reviewed by the Pay Specialist in Pay Services for the list of Casual trade employees who are under incorrect tax wage loss plans i.e., Casual trade employees that are under the REG wage loss plan Corrections to identified errors are made by the Pay Operations Group and checked by the Pay Specialist where appropriate before the final pay confirm.	Valuation / Allocation	Accuracy	Payroll	Manual	Weekly	Inspected a sample of reports listing casual trade employees under incorrect tax wage loss plans to determine whether the corrections were made by the Pay specialist wherever required. Inquired of Payroll personnel to determine whether a query report is generated and reviewed by the Pay Specialist in Pay Services for the list of Casual trade employees who are under incorrect tax wage loss plans, corrections to identified errors are made by the Pay Operations Group and checked by the Pay	No exceptions noted.

Control Objective 18:
Controls provide reasonable assurance that payroll transactions are authorized and accounted for completely and accurately.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
							Specialist where appropriate before the final pay confirm.	
18.08	After the pay run is confirmed, the Payroll Specialist generates and reviews the SAP Gross Earnings report for Casual Trades employees with a gross earning greater than $4,000 and greater than $8,000 for Basic and MCP employees. The Payroll Specialist reviews the report and where ever required, the amount paid on the report is correlated with the appropriate details to be paid as per the employee’s time sheet or other details from Inergi’s client. The Payroll Specialist signs off the report as evidence of review.	Valuation / Allocation, Rights / Obligations	Accuracy	Payroll	Manual	Weekly	Inspected a sample of SAP gross earnings reports listing Casual Trade employees with gross earnings greater than $4,000 and listing Basic and MCP employees with gross earnings greater than $8,000 to determine whether the report was reviewed and signed off by the Payroll Specialist and whether discrepancies were investigated. Inquired of Payroll personnel to determine whether the Payroll Specialist reviews the report for Casual Trade employees with a gross earning greater than $4,000 and greater than $8,000 for Basic and MCP	Exceptions noted.

Control Objective 18:
Controls provide reasonable assurance that payroll transactions are authorized and accounted for completely and accurately.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
							employees and wherever required, compares the amount paid to appropriate supporting details, and signs off on the SAP report as evidence of review.	
18.09	Final payments for terminations, including retirements, except for the parked vacation payout component for MCP employees, are calculated by the SAP system, based on electronic Smart Form requests submitted directly into the SAP system by Inergi's client. For the parked vacation payout component for MCP employees the calculation is performed manually and entered into SAP. An independent member of the Pay Services team reviews and approves the manual calculation prior to processing.	Valuation / Allocation, Existence / Occurrence	Accuracy	Payroll	Automated/ Manual	Event Driven	For a sample of terminations, including retirements, except for the parked vacation payout component for MCP employees, reperform the calculation to determine whether payments were calculated accurately by the SAP system. For a sample of MCP employees with a parked vacation component, inspected the manual calculation performed and entered into SAP, and inspected evidence of review by an	No exceptions noted.

Control Objective 18:
Controls provide reasonable assurance that payroll transactions are authorized and accounted for completely and accurately.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
							independent member of the Pay Services team approving the manual calculation prior to processing. Inquired of Payroll personnel to determine whether final payments for terminations, including retirements, except for the parked vacation payout component for MCP employees are calculated accurately by the SAP system, based on Electronic Smart Form requests submitted directly into the SAP system by Inergi's client. Further inquired of Payroll personnel that the parked vacation payout component for MCP employees is calculated manually and entered into SAP, and an independent member of the Pay	

Control Objective 18:
Controls provide reasonable assurance that payroll transactions are authorized and accounted for completely and accurately.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
							Services team reviews and approves the manual calculation prior to processing.	
18.10	On a monthly basis, reconciliation of movements in all payroll liability accounts as per the GL are prepared by a member of the Accounts Analysis Group and reviewed by an independent Inergi individual. The reconciliations are approved by appropriate independent Inergi personnel as indicated in the Account Control Listing from Inergi's client. A copy of the reconciliation is forwarded to Inergi's client for their approval.	Completeness, Valuation / Allocation, Existence / Occurrence	Completeness, Accuracy, Validity	Payroll	Manual	Monthly	Inspected a sample of payroll liability accounts monthly reconciliations to determine whether the payroll liability accounts were reconciled, discrepancies identified were followed up and the reconciliations were reviewed by an independent Inergi individual. The reconciliations were reviewed/approved by appropriate Inergi personnel as indicated in the Account Control Listing from Inergi's client and a copy of the reconciliation is forwarded to Inergi's client for their approval.	No exceptions noted.

Control Objective 18:
Controls provide reasonable assurance that payroll transactions are authorized and accounted for completely and accurately.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
							Inquired of Financial Services personnel to determine whether movements of all payroll liability accounts as per the GL are reconciled by a member of the Accounts Analysis Group and reviewed/approved by the appropriate independent Inergi individual as indicated in the Account Control Listing from Inergi's client and a copy of the reconciliation is forwarded to Inergi's client for their approval.	
18.11	On a monthly basis, a member of the Accounts Analysis Group reconciles the payroll bank account details to the SAP payroll GL accounts. The reconciliation is approved by appropriate independent Inergi personnel	Completeness, Valuation / Allocation, Existence / Occurrence	Completeness, Accuracy, Restricted Access, Validity	Payroll	Manual	Monthly	Inspected a sample of payroll bank reconciliations to determine whether they were accurately reconciled, whether the identified discrepancies were	No exceptions noted.

Control Objective 18:
Controls provide reasonable assurance that payroll transactions are authorized and accounted for completely and accurately.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
	as indicated in the Account Control Listing from Inergi's client.						followed up and the reconciliations were reviewed/approved by appropriate independent Inergi personnel as indicated in the Account Control Listing from Inergi's client. Inquired of Financial Services personnel to determine whether a member of the Accounts Analysis Group reconciles the payroll bank account details to the SAP payroll GL accounts and that these reconciliations are reviewed/approved by appropriate independent Inergi personnel as indicated in the Account Control Listing from Inergi's client.	
18.12	After every pay confirm, the Payroll Analyst reconciles the	Existence / Occurrence,	Completeness, Accuracy	Payroll	Manual	Weekly	Inspected a sample of total net payroll	No exceptions noted.

Control Objective 18:
Controls provide reasonable assurance that payroll transactions are authorized and accounted for completely and accurately.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
	total net payroll as per the bank and cheque files with the wage type report and payroll journal from SAP. The reconciliation also includes a variance analysis of gross pay. The reconciliation is reviewed and approved by the Payroll Manager and forwarded to Inergi's client for approval.	Valuation / Allocation					reconciliations to determine whether they were reconciled to bank and cheque files and that the reconciliations were reviewed and approved by the Payroll Manager. Inquired of Payroll personnel to determine whether total net payroll reconciliations are reconciled to bank and cheque files and the reconciliations are reviewed and approved by the Payroll Manager	
18.13	For the period through to May 4, 2015, payroll cheques are printed by the Accounts Payable group on the PayBase cheque printing system (refer to Procurement to Pay process controls). The Payroll Specialist compares employee cheques printed on the PayBase	Completeness, Existence / Occurrence, Valuation / Allocation	Completeness, Accuracy	Payroll	Manual	Event Driven / Weekly	For the period through to May 4, 2015, inspected a sample of payroll cheque runs for evidence to determine that the cheques per the PayBase control report were matched to the SAP payment	No exceptions noted.

Control Objective 18: **Controls provide reasonable assurance that payroll transactions are authorized and accounted for completely and accurately.**

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
	cheque printing system by accounts payable as per SAP to a PayBase control report for the on-cycle and off-cycle cheques. Effective May 5, 2015, the Payroll Specialist compares employee cheque information printed on the SAP Cheque Print Status Page Report from AP with the cheque listing on the Wage Type Report from SAP for the on-cycle and off-cycle cheques.						summary report for payroll checks. Inquired of Payroll personnel to determine whether payroll cheques are printed by the Accounts Payable group on the PayBase cheque printing system and the Payroll Specialist matches the cheques per the PayBase control report to the SAP payment summary report for payroll checks for the on-cycle and off-cycle cheques. Effective May 5, 2015, inspected a sample of payroll cheque runs for evidence to determine that the cheques per the SAP Cheque Print Status Page Report from AP were matched to the cheque listing on the Wage Type Report from SAP for payroll checks.	

Control Objective 18:
Controls provide reasonable assurance that payroll transactions are authorized and accounted for completely and accurately.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
							Inquired of Payroll personnel to determine whether payroll cheques printed by the Accounts Payable group and identified on the SAP Cheque Print Status Page Report are matched by the Payroll Specialist to the cheque listing on the Wage Type Report from SAP for payroll checks for the on-cycle and off-cycle cheques.	
18.14	Only off-cycle cheques that are approved are generated. A ‘Request for Correction of Pay’ form is prepared, in case of correction to pay, by the Payroll Administrator. The off cycle payment request is reviewed for accuracy against the approved request by an independent member of the Payroll Services Team. The off cycle workbench result report is reviewed and	Existence / Occurrence, Valuation / Allocation	Accuracy	Payroll	Manual	Event Driven	Inspected a sample from the population of off cycle cheques generated from the SAP system to determine whether the payment requests were reviewed for accuracy against the approved request by an independent member of the Payroll Services	No exceptions noted.

Control Objective 18:
Controls provide reasonable assurance that payroll transactions are authorized and accounted for completely and accurately.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
	confirmed as accurate against the approved request by an independent member of the Payroll Services Team.						Team prior to being processed. For the same sample of off cycle cheques, inspected the off cycle workbench result report is reviewed and confirmed as accurate against the approved requests, by an independent member of the Payroll Services Team. Inquired of Payroll personnel to determine whether only off-cycle cheques that are approved are generated and the off cycle payment request is reviewed by an independent member of the Payroll Services Team. Further inquired of Payroll personnel to determine whether the off cycle workbench result report is reviewed,	

Control Objective 18: Controls provide reasonable assurance that payroll transactions are authorized and accounted for completely and accurately.								
Description of Controls								
CA #	**Control Description**	**FS Assertion**	**Control Objective**	**Account**	**Control Type**	**Frequency**	**Testing of Operating Effectiveness**	**Results of Testing**
							confirmed as accurate and signed off by an independent member of the Payroll Services Team.	
18.15	After every pay confirm, the Pay Administrator prepares the reconciliation for third party remittances. The Sr. Financial Analyst, Pay Services or Payroll Manager reviews and signs off on the third party remittance reconciliation.	Valuation / Allocation, Rights / Obligations	Accuracy, Validity	Payroll	Manual	Weekly	For third party cheque remittances, inspected a sample of remittance summaries and copies of cheques to determine whether they were reviewed by the Sr. Financial Analyst, Pay Services. For third party EFT or Wire Transfer remittances inspected a sample of remittance summaries and wage type reports to determine whether they were reviewed by the Sr. Financial Analyst, Pay Services or Payroll Manager. Inquired of Payroll personnel to determine whether:	No exceptions noted.

Control Objective 18:
Controls provide reasonable assurance that payroll transactions are authorized and accounted for completely and accurately.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
							• For third party cheque remittances, remittance summaries and copies of cheques are reviewed by the Sr. Financial Analyst, Pay Services.; and • For third party EFT or Wire Transfer remittances, remittance summaries and wage type reports are reviewed by Sr. Financial Analyst, Pay Services or Payroll Manager.	
18.16	Pay Calendars are established for each pay group. Pay calendar entries determine that the proper number of pay periods occur and occur in the proper period.	Valuation / Allocation, Rights / Obligations	Accuracy, Validity	Payroll	Automated	Event Driven	Inspected pay calendar information set up in the SAP system to determine whether they were configured according to the business need.	No exceptions noted.

Control Objective 18:
Controls provide reasonable assurance that payroll transactions are authorized and accounted for completely and accurately.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
							Inquired of Payroll personnel to determine whether proper pay periods were defined.	
18.17	On a periodic basis Inergi staff access to run and confirm pay runs within SAP, as provided by the roles, are reviewed for appropriateness by Inergi management, based on data provided by Inergi's client.	Completeness, Existence / Occurrence, Valuation / Allocation	Restricted Access	Payroll	Manual	Quarterly	Inspected the supporting documentation for a sample of access reviews relating to access to run and confirm pay runs within SAP, to determine whether the periodic review was performed for Inergi staff, and that staff access identified as being inappropriate was resolved. Inquired of Inergi management to determine whether access to run and confirm pay runs within SAP for Inergi staff is reviewed on a periodic basis by Inergi management.	No exceptions noted.

Control Objective 18:
Controls provide reasonable assurance that payroll transactions are authorized and accounted for completely and accurately.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
18.18	Employee gross earnings are calculated accurately by the SAP system.	Valuation / Allocation, Rights / Obligations	Completeness, Accuracy	Payroll	Automated	Weekly	Re-performed the calculation of various critical earning codes to determine whether the system accurately calculates gross earnings for various Pay groups. Inquired of Payroll personnel to determine whether employee gross earnings are calculated accurately by the SAP system.	No exceptions noted.
18.19	The SAP Payroll system maintains an audit trail upon modification of all employee master data.	Completeness, Existence / Occurrence, Valuation / Allocation, Presentation / Disclosure	Completeness, Accuracy	Accounts Payable	Automated	Event Driven	Inspected a sample transaction to determine whether changes made to key employee data were reflected in the audit trail within SAP. Inquired of Payroll personnel to determine whether the SAP Payroll system maintains an audit trail upon modification of all employee master data.	No exceptions noted.

Control Objective 18:
Controls provide reasonable assurance that payroll transactions are authorized and accounted for completely and accurately.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
18.20	Changes to the SAP Employee Master file that have retroactive payment impact to Inergi's client's employees are verified and signed off by a member of the Pay Services team. Manual changes require wage register, wage type reports, pay advices or pay simulations to be generated and verified by an independent member of the Pay Services Team.	Completeness, Existence / Occurrence, Valuation / Allocation	Completeness, Accuracy, Validity	Payroll	Manual	Event Driven	Inspected a sample of changes to the SAP Employee Master file that have retroactive payment impact to Inergi's client's employees to determine whether, for manually entered changes wage registers, wage type reports, pay advices or pay simulations are generated, verified and signed off by an independent member of the Pay Services team, and whether changes entered through batch uploads were verified by a member of the Pay Services team. Inquired of Payroll personnel to determine whether changes to the SAP Employee Master file that have retroactive payment impact to Inergi's	No exceptions noted

Control Objective 18: Controls provide reasonable assurance that payroll transactions are authorized and accounted for completely and accurately.

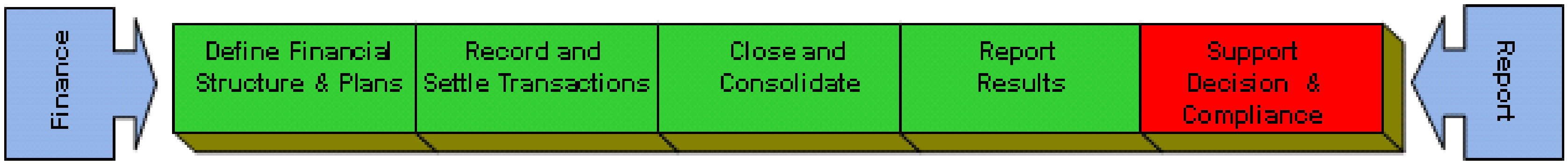
Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
							client's employees require wage registers, wage type reports, pay advices or pay simulations to be generated, verified and signed off by an independent member of the Pay Services team for manually entered changes, and whether batch uploads are verified by a member of the Pay Services team.	

Exceptions Noted:

18.08 – For two of the six weeks sampled, the SAP Gross Earnings report for Casual Trades employees with a gross earning greater than $4,000 were not reviewed.

Record to Report



In scope of Report

Out of scope of Report (Client Retained Procedures)

	Control Objective	Completeness	Accuracy	Validity	Restricted Access
Transaction	19) General Ledger Account Structure Changes	✓	✓	✓	✓
	20) General Ledger Accounting	✓	✓	✓	✓
	21) Month-end Close	✓	✓	✓	*

<u>Control Objectives</u>

- Completeness: All transactions that occurred are entered and accepted for processing
- Accuracy: Transactions are recorded at the correct amount, in the appropriate account, on a timely basis (in the proper period)
- Validity: All recorded transactions actually occurred (are real), relate to the organization, and were approved by designated personnel
- Restricted Access: Transaction processing and data is protected against unauthorized amendments, its confidentiality and physical assets are protected

***** – Restricted access does not apply to the month end close process as it is not relevant for account reconciliations, and the restricted access around journal entries booked as a result of the month end is addressed in control objective 20.

Control Objective 19:
Controls provide reasonable assurance that authorized changes to the general ledger account structure are made completely and accurately.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
19.01	Inergi creates and modifies the General Ledger account structure in SAP, as directed by Inergi's client.	Completeness, Existence / Occurrence, Valuation / Allocation, Presentation / Disclosure, Rights / Obligations	Validity	All	Manual	Event Driven	Inspected a sample of newly created / modified GL accounts to determine whether the created / modified accounts were initiated and approved by Inergi's client. Inquired of Financial Services personnel to determine whether Inergi creates and modifies the General Ledger account structure in SAP as directed by Inergi's client.	No exceptions noted.
19.02	On a periodic basis Inergi staff access to create and update GL master records, including GL structure, chart of accounts, company codes, cost centers and business units within SAP, as provided by the roles, are reviewed for appropriateness by Inergi management, based on data provided by Inergi's client.	Completeness, Existence / Occurrence, Valuation / Allocation, Presentation / Disclosure, Rights / Obligations	Restricted Access	All	Manual	Quarterly	Inspected the supporting documentation for a sample of access reviews relating to access to create and update GL master records including GL structure, chart of accounts, company codes, cost centers and business units within SAP, to determine	No exceptions noted.

Control Objective 19:
Controls provide reasonable assurance that authorized changes to the general ledger account structure are made completely and accurately.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
							whether the periodic review was performed for Inergi staff, and that staff access identified as being inappropriate was resolved. Inquired of Inergi management to determine whether access to create and update GL master records including GL structure, chart of accounts, company codes, cost centers and business units within SAP for Inergi staff is reviewed on a periodic basis by Inergi management.	
19.03	General Accounting runs a programmed utility to verify that the cost centers and profit centers are accurately set up in the SAP.	Completeness, Existence / Occurrence, Valuation / Allocation, Presentation / Disclosure, Rights / Obligations	Validity, Completeness, Accuracy	All	Manual	Monthly	Inquired of Financial Services personnel to determine whether the review of cost centers hierarchy structure and profit centers hierarchy structure is performed monthly. Observed the running of the SAP utility and	No exceptions noted.

Control Objective 19:
Controls provide reasonable assurance that authorized changes to the general ledger account structure are made completely and accurately.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
							inquired with Senior Financial Analyst of the results to determine whether all cost centers and profit centers were correctly set up in SAP. Inspected a sample of the month-end reports to determine whether the utility was run at month-end during these months.	

Control Objective 20:
Controls provide reasonable assurance that authorized journal entries are processed accurately.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
20.01	On a weekly basis the general accounting team runs an interface report to check for errors during the interface between the SAP GL and the other systems (i.e., Integra). Any errors are investigated and resolved.	Completeness, Existence / Occurrence, Valuation / Allocation, Presentation / Disclosure	Completeness, Accuracy	All	Manual	Weekly	Inspected a sample of interface reports to determine whether errors noted as a result of the interface were investigated by the general accounting team and resolved. Inquired of general accounting personnel to determine whether on a weekly basis, errors generated as a result of the interface between SAP and other systems are investigated and resolved by the general accounting team.	No exceptions noted.
20.02	The SAP system generates a unique ID for each journal entry processed.	Completeness	Completeness	All	Automated	Event Driven	Observed the creation of a new journal entry in the SAP Production environment to determine whether a unique ID was automatically generated by the system. Inquired of Financial Services personnel to determine whether the SAP system generates a unique	No exceptions noted.

Control Objective 20: **Controls provide reasonable assurance that authorized journal entries are processed accurately.**								
Description of Controls								
CA #	**Control Description**	**FS Assertion**	**Control Objective**	**Account**	**Control Type**	**Frequency**	**Testing of Operating Effectiveness**	**Results of Testing**
							ID for each journal entry processed.	
20.03	The SAP system does not allow a journal entry to be posted to a closed period.	Completeness, Valuation / Allocation	Completeness, Accuracy	All	Automated	Event Driven	Observed the attempt of posting a journal entry to a closed period to determine whether the system prevented the posting to be processed. Inquired of Financial Services personnel to determine whether the SAP system does not allow a journal entry to be posted to a closed period.	No exceptions noted.
20.04	For manual journal entries, the following key fields are mandatory for entries to be posted: Posting date, document date, company code, ledger, account number, posting key, currency and $ amount, profit centre, and useful description (journal header and lines).	Completeness, Valuation / Allocation	Completeness, Accuracy	All	Automated	Event Driven	Observed the attempt of posting a journal entry with an invalid combination of mandatory key fields to determine whether the system prevented the posting to be processed. Inquired of Financial Services personnel to determine whether the SAP system prevents an entry to be made with invalid details	No exceptions noted.

Control Objective 20: **Controls provide reasonable assurance that authorized journal entries are processed accurately.**								
Description of Controls								
CA #	**Control Description**	**FS Assertion**	**Control Objective**	**Account**	**Control Type**	**Frequency**	**Testing of Operating Effectiveness**	**Results of Testing**
							in the following mandatory key fields: Posting date, document date, company code, ledger, account number, posting key, currency and $ amount, profit centre, and useful description (journal header and lines).	
20.05	During the journal entry process, the SAP system assigns a system user ID to each journal entry to identify the employee processing the journal entry.	Completeness	Completeness, Accuracy	All	Automated	Event Driven	Observed the attempt of entering a journal to determine whether SAP assigns a system user ID to the journal identifying the employee processing the journal entry. Inquired of Financial Services personnel to determine whether the SAP system automatically associates a system user ID to each journal entry indicating the employee who processed the entry.	No exceptions noted.
20.06	The SAP system does not allow journal entries to be	Completeness, Valuation /	Completeness, Accuracy,	All	Automated	Event Driven	Observed the attempt of posting to the GR/IR	No exceptions noted.

Control Objective 20: **Controls provide reasonable assurance that authorized journal entries are processed accurately.**								
Description of Controls								
CA #	**Control Description**	**FS Assertion**	**Control Objective**	**Account**	**Control Type**	**Frequency**	**Testing of Operating Effectiveness**	**Results of Testing**
	made to the GR/IR account identified as a reconciliation account.	Allocation, Existence / Occurrence	Validity, Restricted Access				account identified as a reconciliation account to determine whether the system prevents the posting to be processed. Inquired of Financial Services personnel to determine whether the SAP system does not allow journal entries to be made to the GR/IR account identified as a reconciliation account.	
20.07	On a periodic basis Inergi staff access to open and close periods within SAP, as provided by the roles, are reviewed for appropriateness by Inergi management, based on data provided by Inergi's client.	Completeness	Restricted Access	All	Manual	Quarterly	Inspected the supporting documentation for a sample of access reviews relating to access to open and close periods within SAP, to determine whether the periodic review was performed for Inergi staff, and that staff access identified as being inappropriate was resolved. Inquired of Inergi management to determine whether access to open and	No exceptions noted.

Control Objective 20: **Controls provide reasonable assurance that authorized journal entries are processed accurately.**								
Description of Controls								
CA #	**Control Description**	**FS Assertion**	**Control Objective**	**Account**	**Control Type**	**Frequency**	**Testing of Operating Effectiveness**	**Results of Testing**
							close periods within SAP for Inergi staff is reviewed on a periodic basis by Inergi management.	
20.08	On a periodic basis Inergi staff access to process manual journal entries within SAP, as provided by the roles, are reviewed for appropriateness by Inergi management, based on data provided by Inergi's client.	Completeness	Restricted Access	All	Manual	Quarterly	Inspected the supporting documentation for a sample of access reviews relating to access to process manual journal entries within SAP, to determine whether the periodic review was performed for Inergi staff, and that staff access identified as being inappropriate was resolved. Inquired of Inergi management to determine whether access to process manual journal entries within SAP for Inergi staff is reviewed on a periodic basis by Inergi management.	No exceptions noted.
20.09	Inergi staff enters authorized recurring journal entry requests that are received and post	Existence / Occurrence, Accuracy	Validity, Accuracy	All	Manual	Event Driven	Inspected a sample of authorized recurring journal entries posted to determine whether the entries were	No exceptions noted.

Control Objective 20: **Controls provide reasonable assurance that authorized journal entries are processed accurately.**								
Description of Controls								
CA #	**Control Description**	**FS Assertion**	**Control Objective**	**Account**	**Control Type**	**Frequency**	**Testing of Operating Effectiveness**	**Results of Testing**
	them within the applicable period.						posted accurately and within the applicable period. Inquired of Financial Services personnel to determine whether the authorized recurring journal entries were posted within the applicable period.	
20.10	All manual journal entries greater than $250K are automatically parked in SAP and require approval prior to being processed.	Completeness	Completeness, Accuracy	All	Automated	Event Driven	Inspected a sample of manual journal entries greater than $250K to determine whether the entries required approval prior to being processed. Inquired of Financial Services personnel to determine whether the manual journal entries greater than $250K required approval prior to being processed.	No exceptions noted.
20.11	On a monthly basis, General Ledger accounts are reconciled to the sub-ledger balances by a	Completeness, Existence / Occurrence, Valuation /	Completeness, Accuracy	All	Manual	Monthly	Inspected a sample of reconciliations performed during the period under test to determine whether	No exceptions noted.

Control Objective 20:
Controls provide reasonable assurance that authorized journal entries are processed accurately.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
	member of the Accounts Analysis Group, and any differences are investigated and resolved. The reconciliations are approved by appropriate independent Inergi personnel as indicated in the Account Control Listing from Inergi's client, before they are sent to Inergi's client for approval.	Allocation, Presentation / Disclosure, Rights / Obligations					identified discrepancies were followed up and the reconciliations were reviewed/approved by appropriate independent Inergi personnel as indicated in the Account Control Listing from Inergi's client prior to being sent to Inergi's client. Inquired of Financial Services personnel to determine whether General Ledger accounts are reconciled by each line item and differences are investigated and resolved and the reconciliations are reviewed/approved by appropriate independent Inergi personnel as indicated in the Account Control Listing from Inergi's client before they are sent to Inergi's client for approval.	
20.12	All manual journal entries less than $250K are periodically reviewed and	Completeness	Completeness, Accuracy	All	Manual	Quarterly	Inspected a sample of manual journal entries less than $250K to determine	No exceptions noted.

Control Objective 20: **Controls provide reasonable assurance that authorized journal entries are processed accurately.**								
Description of Controls								
CA #	**Control Description**	**FS Assertion**	**Control Objective**	**Account**	**Control Type**	**Frequency**	**Testing of Operating Effectiveness**	**Results of Testing**
	approved after being processed.						whether the entries were reviewed and approved after being processed. Any discrepancies identified were followed up and resolved. Inquired of Financial Services personnel to determine whether the manual journal entries less than $250K were reviewed and approved after being processed, and any discrepancies identified are followed up and resolved.	

Control Objective 21:
Controls provide reasonable assurance that month-end close procedures are designed and executed to determine that ending General Ledger account balances are complete and accurate.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
21.01	On a monthly basis, General Ledger accounts are reconciled to the sub-ledger balances by a member of the Accounts Analysis Group, and any differences are investigated and resolved. The reconciliations are approved by appropriate independent Inergi personnel as indicated in the Account Control Listing from Inergi's client before they are sent to Inergi's client for approval.	Completeness, Existence / Occurrence, Valuation / Allocation, Presentation / Disclosure, Rights / Obligations	Completeness, Accuracy	All	Manual	Monthly	Inspected a sample of reconciliations performed during the period under test to determine whether identified discrepancies were followed up and the reconciliations were reviewed/approved by appropriate independent Inergi personnel as indicated in the Account Control Listing from Inergi's client prior to being sent to Inergi's client. Inquired of Financial Services personnel to determine whether General Ledger accounts are reconciled by each line item and differences are investigated and resolved and the reconciliations are reviewed/approved by appropriate independent Inergi personnel as indicated in the Account Control Listing from Inergi's client before they are sent to Inergi's client for approval.	No exceptions noted.

Control Objective 21:
Controls provide reasonable assurance that month-end close procedures are designed and executed to determine that ending General Ledger account balances are complete and accurate.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
21.02	On a monthly basis, General Accounting performs a reconciliation of Inergi's client's internal management reporting tool (Business Intelligence) to the SAP GL (General Ledger) system.	Completeness, Valuation / Allocation, Presentation / Disclosure	Completeness, Accuracy	All	Manual	Monthly	Inspected a sample of Business Intelligence to SAP reconciliations to determine whether the reconciliations were performed and discrepancies were identified and followed up. Inquired of Financial Services personnel to determine whether General Accounting performs a reconciliation of Inergi's client's internal management reporting tool (Business Intelligence) to the SAP GL (General Ledger) system.	No exceptions noted.
21.03	Batch jobs are scheduled for each of the sub-ledgers for which Inergi is responsible. General Accounting runs queries at month-end to verify that batch processes and necessary journal entries have been completed and reflected in the SAP GL.	Completeness, Valuation / Allocation, Presentation / Disclosure	Completeness, Accuracy	All	Manual	Monthly	Inspected a sample of month-end queries run and inquired of the Senior Financial Specialist to determine whether the monitoring of batch processes had been completed. Inquired of Financial Services personnel to	No exceptions noted.

Control Objective 21:
Controls provide reasonable assurance that month-end close procedures are designed and executed to determine that ending General Ledger account balances are complete and accurate.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
							determine whether General Accounting runs queries at month-end to verify that batch processes and necessary journal entries have been completed and reflected in the SAP GL.	
21.04	Following verification by General Accounting, the Senior Financial Specialist, General Accounting, closes the General Ledger reporting period in accordance with the fiscal calendar, to prevent further entries being posted.	Completeness, Valuation / Allocation	Completeness, Accuracy	All	Manual	Monthly	Inspected in the SAP Production environment to determine whether only the current reporting period was open for posting of journal entries. Inspected the SAP Production environment to determine whether the dates of the current reporting period open for posting journal entries was as per the fiscal calendar. Inquired of Financial Services personnel to determine whether the Senior Financial Specialist, General Accounting closes the reporting period in accordance with the fiscal	No exceptions noted.

Control Objective 21:
Controls provide reasonable assurance that month-end close procedures are designed and executed to determine that ending General Ledger account balances are complete and accurate.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
							calendar to prevent further entries being posted.	
21.05	On a monthly basis, a member of the Accounts Analysis Group reconciles Inergi's client's corporate bank accounts. The reconciliations are approved by appropriate independent Inergi personnel as indicated in the Account Control Listing from Inergi's client.	Completeness, Valuation / Allocation	Completeness, Accuracy	All	Manual	Monthly	Inspected a sample of bank accounts to determine whether the reconciliations were performed and the reconciliation reports were reviewed/approved by appropriate independent Inergi personnel as indicated in the Account Control Listing from Inergi's client. Inquired of Financial Services personnel to determine whether a member of the Accounts Analysis Group reconciles Inergi's client's corporate bank accounts and that the reconciliations are reviewed/approved by appropriate independent Inergi personnel as indicated in the Account Control Listing from Inergi's client.	No exceptions noted.

Control Objective 21: Controls provide reasonable assurance that month-end close procedures are designed and executed to determine that ending General Ledger account balances are complete and accurate.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
21.06	For the period through to January 31, 2016, only authorized Revenue Accrual journal entries are entered into SAP by Corporate Accounting. Effective February 1, 2016, Inergi's client is responsible for the Revenue Accrual Journal Entries in SAP.	Existence / Occurrence, Valuation / Allocation	Validity	All	Manual	Monthly	For the period through to January 31, 2016, inspected a sample of Revenue Accrual Journal Entries to determine whether Inergi's client approved the entries. Inspected a sample of journal entries to determine whether the amount of the journal corresponded with the amount as authorized by Inergi's client. Inquired of Financial Services personnel to determine whether only authorized Revenue Accrual journal entries are entered into SAP by Corporate Accounting. Effective February 1, 2016, this test procedure is no longer applicable.	No exceptions noted.
21.07	On a quarterly basis, the Accounts Analysis Group compiles and submits to Inergi's client a Quarterly Report which provides a variance	Existence / Occurrence, Valuation / Allocation	Validity	All	Manual	Quarterly	Inspected a sample of variance analysis reports for AP Variance, AR Variance & Other LT Assets, and Regulatory Assets & Liabilities to	No exceptions noted.

Control Objective 21:
Controls provide reasonable assurance that month-end close procedures are designed and executed to determine that ending General Ledger account balances are complete and accurate.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
	analysis of changes in all General Ledger accounts for which Inergi is responsible.						determine whether the variance analysis was performed and whether the reports were reviewed before sending to Inergi's client. Inquired of Financial Services personnel to determine whether the Accounts Analysis Group compiles and submits to Inergi's client a Quarterly Report which provides a variance analysis of changes in all General Ledger accounts for which Inergi is responsible for.	
21.08	At year end, the Senior Financial Specialist, General Accounting runs a report to identify any differences between the closing and opening balances. Any differences are investigated and corrected by General Accounting.	Completeness, Valuation / Allocation	Completeness, Accuracy	All	Manual	Annually	Inspected the SAP report showing the balances for closing and opening periods to determine whether discrepancies were investigated. Inquired of Financial Services personnel to determine whether at year end, the Senior Financial Specialist, General	No exceptions noted.

Control Objective 21:
Controls provide reasonable assurance that month-end close procedures are designed and executed to determine that ending General Ledger account balances are complete and accurate.

Description of Controls

CA #	Control Description	FS Assertion	Control Objective	Account	Control Type	Frequency	Testing of Operating Effectiveness	Results of Testing
							Accounting runs a report to identify any differences between closing and opening balances and any differences are investigated and corrected.	
21.09	On a periodic basis Inergi staff access to roll forward year end closing statements within SAP, as provided by the roles, are reviewed for appropriateness by Inergi management, based on data provided by Inergi's client.	Completeness	Restricted Access	All	Manual	Quarterly	Inspected the supporting documentation for a sample of access reviews relating to access to roll forward year end closing statements within SAP, to determine whether the periodic review was performed for Inergi staff, and that staff access identified as being inappropriate was resolved. Inquired of Inergi management to determine whether access to roll forward year end closing statements within SAP for Inergi staff is reviewed on a periodic basis by Inergi management.	No exceptions noted.

Section V

V. Other Information Provided by Inergi Business Process Outsourcing

Management's Response to Exceptions Noted in Section IV

CA#	Control Description	Exceptions Noted	Management Response
2.02	Implausible Reads exceptions flagged by the MTCCA application due to meter reading validation checks are resolved by the CCC.	For one of the 97 Implausible Read exceptions sampled, the exception was erroneously resolved by CCC staff. Management has also brought to our attention evidence of an additional instance whereby a flagged Implausible Read exception was erroneously resolved by CCC staff.	The exception noted was erroneously resolved due to human error. On June 2, 2015, an agent improperly changed a reading on a CMO amount entered as an estimate by Inergi's Client to a reading calculated by using the Rule of 90%. The agent did not review a separate data source when evaluating the reading. The agents actions caused the account to be overbilled on an estimate reading of 31,479, compared to what they would have been billed on the actual reading, 29,639. The exception identified by Management was where the agent erroneously resolved a flagged Implausible Read exception on June 8, 2015. Additional training has been conducted, simulating an account that was resolved incorrectly as a training aide to stress the implications of this work not being completed properly and how the accounts should have been worked. Effective June 16, 2015, a process has been implemented requiring a CCC Team Coach to conduct a final review of outsorted invoices that have released on a daily basis.

CA#	Control Description	Exceptions Noted	Management Response
4.05	Billing and invoice outsorts flagged by the MTCCA application due to validation checks are resolved daily by BCC/CCC staff.	Management has brought to our attention evidence of an instance whereby a flagged Invoice Outsort was erroneously resolved by BCC/ CCC staff.	The exception noted was erroneously resolved due to human error. The invoice outsort identified by Management was where the agent erroneously resolved a flagged Implausible Read exception on June 8, 2015. Additional training has been conducted, simulating an account that was resolved incorrectly as a training aide to stress the implications of this work not being completed properly and how the accounts should have been worked. Effective June 16, 2015, a process has been implemented requiring a CCC Team Coach to conduct a final review of outsorted invoices that have released on a daily basis. Inergi is re-evaluating the overall outsort process to determine process improvement that can be implemented.
7.12	Refund cheques are produced and applied to the Business Partner account only after review and approval per the OAR.	For one of the 32 credits sampled, a refund was processed to the Business Partner despite an instruction to reject from the OAR authorized individual.	The refund was erroneously resolved due to human error. A subsequent invoice has been sent to the Business Partner, including the refunded amount. The process is currently being reviewed to determine if it is practical to have the OAR authorized individuals processing the approvals directly in SAP rather than utilizing email trails as instructions.

CA#	Control Description	Exceptions Noted	Management Response
11.10	SAP does not allow an individual to approve the same invoice that they entered.	Testing in February 2016 indicated that SAP does not prevent an individual from approving the same invoice that they entered.	There was an approved user access request implemented in January 2016, for a new Inergi invoice processor. The roles provisioned provided the individual with the ability to be selected as first approver on non-PO invoices. Due to the known conflicting access the provisioned roles provide, the Inergi provisioning process requested for the user to be added to table HRP1001 position S5000076. The user addition to the HRP1001 table was incorrectly completed by Inergi's Client's HR Reporting Centre of Excellence. As a result of this, this individual was able to be selected as first approver on non-PO invoices. Non-PO invoices must be approved by a second approver with appropriate financial approval. Inergi Management confirmed that there was no inappropriate approvals completed by the individual between January 2016 and February 24, 2016, when the issue was resolved.
18.08	After the pay run is confirmed, the Payroll Specialist generates and reviews the SAP Gross Earnings report for Casual Trades employees with a gross earning greater than $4,000 and greater than $8,000 for Basic and MCP employees. The Payroll Specialist reviews the report and where ever required, the amount paid on the report is correlated with the appropriate details to be paid as per the employee's time sheet or other details from Inergi's client. The Payroll Specialist signs off the report as evidence of review.	For two of the six weeks sampled, the SAP Gross Earnings report for Casual Trades employees with a gross earning greater than $4,000 were not reviewed.	For the weeks in question, verification procedures were performed using a set of predefined queries including net pay amounts, earnings code, tax wage loss plans. The review of SAP Gross Earnings report for Casual Trades has subsequently been completed, with no follow up actions required.

CA#	Control Description	Exceptions Noted	Management Response
			The Inergi team had a detailed review of the process, and improvements have been implemented. Inergi will continue working with Inergi's client to improve the pay run verification controls.

Information Technology General Controls

Testing relative to the design and effectiveness of IT general controls covering the period assessed in this report have been documented in the Inergi – Toronto Service Delivery Centre information Technology Outsourcing report issued under separate header. Inergi's client and user auditor should assess the impact of any exceptions noted in this report on the continued operating effectiveness of automated application controls and system generated reports throughout the reporting period.

Disaster Recovery and Business Continuity Planning

The Inergi Business Continuity Team coordinates the Disaster Recovery efforts for systems hosted by the TSDC. This includes:

- Formulating an appropriate Disaster Recovery strategy for each customer to recover critical business functions as per agreed to recovery time and recovery point objectives.
- Developing, maintaining and exercising Disaster Recovery Plans for customers.
- Developing, maintaining and exercising Disaster Recovery and Life Safety plans for the Inergi infrastructure and facility.

Providing optional value-added services including, Business Impact Analysis, Risk Management, Business Continuity plans including Emergency Response and Life Safety Plans.

Section VI

VI. Glossary of Terms

General Terms / Acronyms:

Term	Definition
AAA	Action / Awareness / Alerts
ADC	Average Daily Consumption
AFDA	Allowance for Doubtful Accounts
AMCC	Advanced Monitoring Control Computers
AMT	Account Management Team
AP	Accounts Payable
AR	Accounts Receivable
ARP	Automated Remittance Processing
AT 801	Attestation Section 801
AUC	Assets Under Construction
AUP	Average Unit Price
BCC	Business Customer Centre
BDH	Billing Adjustment Report
BRD	Business Request Document
BUs	Business Units
CAP02	A report generated and used during the Fixed Assets Capitalization process
CAT ID	Category Identification
CCC / LCCC	Customer Contact Centre (Markham Location) / London Customer Contact Centre (London Location)
CIP	Construction in Progress
CMIG	Customer Migration Tool
Complex Accounts	Interval Meter Accounts
COP	Cost of Power
CRA	Canada Revenue Agency
CRS	Cheque Reconciliation Service
CSO	Customer Service Operations
CSS	Customer Service System
CWIP	Construction Work in Progress
DCB	Distributor Consolidated Bill

Term	Definition
DCB-RLI	Distributor Consolidated Bill – Retailer Line Item
DXG	Distribution Generation
EBT	Electronic Business Transaction
EFT	Electronic Funds Transfer
EHT	Employer Health Tax
FDM	Finance Data Mart
FIT	Feed In Tariff
GL	General Ledger
GPH	Good Payment History
HOEP	Hourly Ontario Energy Price
IBR	Invoice Bill Ready
IBR-EBT	Invoice Bill Ready – Electronic Business Transaction
IESO	Independent Electricity System Operator
IM	Interval Meter
INV	Invoice Related
IST	Invoice Settlement Total
ITGC	Information Technology General Controls
LDC	Local Distribution Company
LTLT	Long Term Load Transfer
Mass Market Accounts	Non-Interval Meter Accounts
MBS	Market Deregulation Billing Support Database
MCP	Management Compensated Personnel
MDM/R	Meter Data Management Repository
MOMS	Meter Operations Management System
MPA	Memorandum of Purchase Approval
MR	Material Request
MTCCA	Meter to Cash Composite Application
MV-STAR	A meter data management system
NOD	Notice of Disagreement
NSLS	Net System Load Shape
NSLS WAHSP	Net System Load Shape – Weight Average Hour Spot Price
OAR	Organizational Authority Register
OEB	Ontario Energy Board

Term	Definition
OEFC	Ontario Electricity Finance Corporation
OM&A	Operating, Maintenance and Administration
OPA	Ontario Power Authority (merged with Independent Electricity Supply Operator, IESO effective January 1, 2015, under the new name IESO)
OTACE	On Time Above Customer Expectations
PDP	Personal Development Plan
PO	Purchase Order
PQC	Payment & Quality Control
PR	Purchase Requests
QA	Quality Assurance
RCB	Retailer Consolidated Billing
REIS	Report of Equipment In Service
RESOP	Renewable Energy Standard Offer Program
RET	Renewable Energy Technology
ROE	Record of Employment
RPP	Rate Protection Plan
RRA	Rural Rate Assistance
RRRP	Rural Rate Protection Plan
RS	Retail Settlement
RSC	Retail Settlement Code
RTT	Retail Totalization Table
SAP PI	SAP Process Interface
SLA	Service Level Agreement
SLM	Service Level Management
SMS	Supply Management Services
SDP	Service Delivery Point
SQL	Structure Query Language
SSS	Standard Supply Service
STL	Street Light
STLT	Short Term Load Transfer
STR	Service Transaction Request
TCS	The Collection System
T&D	Transmission and Distribution

Term	Definition
TMP	Temporary Employees
TOU	Time of Use
TRDF	Transmission Reconciliation Data File
TSDC	Toronto Service Delivery Centre (consists of Inergi LP and New Horizons Systems Solutions Inc., which are wholly owned by Cap Gemini S.A.)
TWE	Transportation and Work Equipment
TXG	Transmission Generation
USDP	Unique Service Delivery Point
VEE	Validated, estimated and edited
WAGA	Weighted Average Global Adjustment
WAHSP	Weighted Average Hourly Spot Price
WBS	Work Breakdown Structure
WF	Work Flow
WCS	Wholesale Cost Summary
WS	Wholesale Settlements
XML	eXtensible Markup Language

Financial Statement (FS) Assertions:

Term	Definition
Completeness	All transactions and accounts that should be presented in the financial statements are included.
Existence or Occurrence	Assets or liabilities of the entity exist at a given date and recorded transactions have occurred during a given period.
Valuation or Allocation	Asset, liability, equity, revenue and expense components have been included in the financial statements at appropriate amounts.
Rights and Obligations	Assets are the rights of the entity and liabilities are the obligations of the entity at a given date.
Presentation and Disclosure	Components of the financial statements are properly classified, described, and disclosed.

Information Processing (Control) Objectives:

Term	Definition
Completeness	All transactions that occurred are entered and accepted for processing.
Accuracy	Transactions are recorded at the correct amount, in the appropriate account, on a timely basis (in the proper period).
Validity	All recorded transactions actually occurred (are real), relate to the organization, and were approved by designated personnel.
Restricted Access	Transaction processing and data is protected against unauthorized amendments, its confidentiality and physical assets are protected.

Toronto Service Delivery Centre
Information Technology Outsourcing

Report on Management's Description of its Service Organization's Application Management and Infrastructure Management Outsourcing Services Information Technology General Control System and on the Suitability of the Design and Operating Effectiveness of Controls

For the period June 1, 2015 to May 31, 2016

The report on Capgemini Toronto Service Delivery Centre Information Technology Outsourcing's Description of its Application Management and Infrastructure Management Outsourcing Services Information Technology General Control System and on the Suitability of the Design and Operating Effectiveness of Controls is Confidential. The report is intended solely for use by the management of Capgemini, its user organizations, and the independent auditors of its user organizations, and is not intended and should not be used by anyone other than these specified parties.

Table of Contents

Section I
Independent Service Auditor's Report

I. Independent Service Auditor's Report

To the Management of the Capgemini Toronto Service Delivery Centre – Information Technology Outsourcing:

Scope

We have examined the Capgemini Toronto Service Delivery Centre – Information Technology Outsourcing ("TSDC-IT") description of its Application Management ("AM") and Infrastructure Management ("IM") outsourcing services information technology general control system for support of user entities' financial information technology environments throughout the period June 1, 2015 to May 31, 2016 (the "description") and the suitability of the design and operating effectiveness of TSDC-IT's controls to achieve the related control objectives stated in the description. The description indicates that certain control objectives specified in the description can be achieved only if complementary user entity controls contemplated in the design of TSDC-IT's controls are suitably designed and operating effectively, along with related controls at the service organization. We have not evaluated the suitability of the design or operating effectiveness of such complementary user entity controls.

The description of TSDC-IT's information technology general controls for the aforementioned services does not include control objectives related to business process controls, automated application controls, or related to key reports produced by the application. Therefore, our examination did not extend to control objectives related to business process controls, automated application controls, or key reports produced by the application.

TSDC-IT uses infrastructure hosting service organizations for certain of its IM services. The description in Sections III and IV includes only the controls and related control objectives of TSDC-IT and excludes the control objectives and related controls of the infrastructure hosting service organizations. Our examination did not extend to controls of the infrastructure hosting service organizations.

Service organization's responsibilities

In Section II, TSDC-IT has provided an assertion about the fairness of the presentation of the description and suitability of the design and operating effectiveness of the controls to achieve the related control objectives stated in the description. TSDC-IT is responsible for preparing the description and for the assertion, including the completeness, accuracy, and method of presentation of the description and the assertion, providing the services covered by the description, specifying the control objectives and stating them in the description, identifying the risks that threaten the achievement of the control objectives, selecting the criteria, and designing, implementing, and documenting controls that are suitably designed and operating effectively to achieve the related control objectives stated in the description.

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Our independence and quality control

We have complied with the independence and other ethical requirements of the Code of Ethics for Professional Accountants issued by the International Ethics Standards Board for Accountants, which is founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behaviour.

Our firm applies International Standard on Quality Control 1 and accordingly maintains a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

Service auditor's responsibilities

Our responsibility is to express an opinion on the fairness of the presentation of the description and on the suitability of the design and operating effectiveness of the controls to achieve the related control objectives stated in the description, based on our examination. We conducted our examination in accordance with AT Section 801, *Reporting on Controls at a Service Organization*, established by the American Institute of Certified Public Accountants, and International Standard on Assurance Engagements ("ISAE") 3402, *Assurance Reports on Controls at a Service Organization*, issued by the International Auditing and Assurance Standards Board. Those standards require that we comply with ethical requirements and plan and perform our examination to obtain reasonable assurance about whether, in all material respects, the description is fairly presented and the controls were suitably designed and operating effectively to achieve the related control objectives stated in the description throughout the period June 1, 2015 to May 31, 2016.

An examination of a description of a service organization's system and the suitability of the design and operating effectiveness of the service organization's controls to achieve the related control objectives stated in the description involves performing procedures to obtain evidence about the fairness of the presentation of the description and the suitability of the design and operating effectiveness of those controls to achieve the related control objectives stated in the description. Our procedures included assessing the risks that the description is not fairly presented and that the controls were not suitably designed or operating effectively to achieve the related control objectives stated in the description. Our procedures also included testing the operating effectiveness of those controls that we consider necessary to provide reasonable assurance that the related control objectives stated in the description were achieved. An examination engagement of this type also includes evaluating the overall presentation of the description and the suitability of the control objectives stated therein, and the suitability of the criteria specified by the service organization and described in management's assertion in Section II. We believe that the evidence we obtained is sufficient and appropriate to provide a reasonable basis for our opinion.

Inherent limitations

Because of their nature, controls at a service organization may not prevent, or detect and correct, all errors or omissions in supporting an information technology environment. Also, the projection to the future of any evaluation of the fairness of the presentation of the description, or conclusions about the suitability of the design or operating effectiveness of the controls to achieve the related control objectives is subject to the risk that controls at a service organization may become inadequate or fail.

Other information provided by the service organization

The information included in Section V, "Other Information Provided by TSDC-IT", and Section VI, "Glossary of Terms", is presented by management of TSDC-IT to provide additional information and is not a part of TSDC-IT's description of its AM and IM services information technology general control system made available to user entities during the period June 1, 2015 to May 31, 2016. Information about TSDC-IT's business continuity planning and disaster recovery has not been subjected to the procedures applied in the examination of the description of the AM and IM services information technology general control system and of the suitability of the design and operating effectiveness of controls to achieve the related control objectives stated in the description of the AM and IM services information technology general control system and accordingly, we express no opinion on it.

Opinion

In our opinion, based on the criteria described in TSDC-IT's assertion in Section II, in all material respects:

a. the description fairly presents the AM and IM services information technology general control system that was designed and implemented throughout the period June 1, 2015 to May 31, 2016.

b. the controls related to the control objectives of TSDC-IT stated in the description were suitably designed to provide reasonable assurance that the control objectives would be achieved if the controls operated effectively throughout the period June 1, 2015 to May 31, 2016 and user entities applied the complementary user entity controls contemplated in the design of TSDC-IT's controls for the period June 1, 2015 to May 31, 2016.

c. the controls of TSDC-IT tested, which together with the complementary user entity controls referred to in Section III of this report, if operating effectively, were those necessary to provide reasonable assurance that the control objectives stated in the description were achieved, operated effectively throughout the period June 1, 2015 to May 31, 2016.

Description of tests of controls

The specific controls tested and the nature, timing, and results of those tests are listed in Section IV.

Intended users and purpose

This report, including the description of tests of controls and results thereof in Section IV, is intended solely for the information and use of TSDC-IT, user entities of TSDC-IT's AM and IM services information technology general control system during some or all of the period June 1, 2015 to May 31, 2016, and the independent auditors of such user entities, who have a sufficient understanding to consider it, along with other information including information about controls implemented by user entities themselves, when assessing the risks of material misstatements of user entities' financial statements. This report is not intended to be and should not be used by anyone other than these specified parties. If report recipients are not user organizations that have contracted for services with TSDC-IT for the period specified above or their independent auditors (herein referred to as a "non-specified user") and have obtained this report, or have access to it, use of this report is the non-specified user's sole responsibility and at the non-specified user's sole and exclusive risk. Non-specified users may not rely on this report and do not acquire any rights against PricewaterhouseCoopers LLP as a result of such access. Further, PricewaterhouseCoopers LLP does not assume any duties or obligations to any non-specified user who obtains this report and/or has access to it.

PricewaterhouseCoopers LLP

Toronto, Ontario
July 18, 2016

Section II
Capgemini Toronto Service Delivery Centre – Information Technology Outsourcing’s Assertion

II. Capgemini Toronto Service Delivery Centre – Information Technology Outsourcing's Assertion

Capgemini Toronto Service Delivery Centre – Information Technology Outsourcing's Assertion

We have prepared the description of the Capgemini Toronto Service Delivery Centre – Information Technology Outsourcing's Application Management ("AM") and Infrastructure Management ("IM") outsourcing services information technology general control system (the "description") for the user entities of the system during some or all of the period June 1, 2015 to May 31, 2016 and their user auditors who have a sufficient understanding to consider it, along with other information, including information about controls implemented by the user entities of the system themselves, when assessing the risks of material misstatement of user entities' financial statements. We confirm, to the best of our knowledge and belief, that:

a. The description fairly presents the AM and IM outsourcing services information technology general control system made available to the user entities of the system during some or all of the period June 1, 2015 to May 31, 2016 for support of the user entities' financial information technology environments. The description indicates that certain control objectives specified in the description can be achieved only if complementary user entity controls contemplated in the design of Capgemini's controls are suitably designed and operating effectively, along with related controls at Capgemini. The criteria we used in making this assertion were that the description:

   i. presents how the system made available to the user entities of the system was designed and implemented to support the relevant information technology environments, including:

      (1) the types of services provided, including, as appropriate, the location where those services are executed and the types of AM and IM services provided.

      (2) the procedures, within both automated and manual processes, by which AM and IM services are provided, for the user entities of the system.

      (3) the related information technology records and supporting information that are used to initiate, authorize, record, process, and report for support of the user entities' financial information technology environments; this includes the monitoring and resolution of normal technology incidents and how those incidents are reported to the user entities of the system.

      (4) how the system captures and addresses significant events.

(5) the process used to prepare service reports or other information provided to the user entities of the system.

(6) specified control objectives and controls designed to achieve those objectives including, as applicable, complementary user entity controls contemplated in the design of the service organization's controls.

(7) other aspects of our control environment, risk assessment process, information and communication systems, control activities, and monitoring controls that are relevant to supporting the information technology environment for the user entities of the system.

ii. does not omit or distort information relevant to the scope of the AM and IM outsourcing services information technology general control system, while acknowledging that the description is prepared to meet the common needs of a broad range of user entities of the system and the independent auditors of the user entities, and may not, therefore, include every aspect of the AM and IM outsourcing services information technology general control system that each individual user entity of the system and its auditor may consider important in its own particular environment.

b. The description includes relevant details of changes to the service organization's information technology general control system during the period covered by the description when the description covers a period of time.

c. The controls related to the control objectives stated in the description, which together with the complementary user entity controls referred to above, if operating effectively, were suitably designed and operated effectively throughout the period June 1, 2015 to May 31, 2016 to achieve those control objectives. The criteria we used in making this assertion were that:

i. the risks that threaten the achievement of the control objectives stated in the description have been identified by the service organization;

ii. the controls identified in the description would, if operating as described, provide reasonable assurance that those risks would not prevent the control objectives stated in the description from being achieved; and

iii. the controls were consistently applied as designed, including whether manual controls were applied by individuals who have appropriate competence and authority.

Management of Capgemini TSDC-IT

Section III
Description of Application Management ("AM") and Infrastructure Management ("IM") Outsourcing Services Information Technology General Control System

III. Description of Application Management ("AM") and Infrastructure Management ("IM") Outsourcing Services Information Technology General Control System

This report describes the system of Toronto Service Delivery Centre - Information Technology Outsourcing ("TSDC-IT"), which consists of Inergi LP and New Horizons Systems Solutions Inc., which are wholly owned by Cap Gemini S.A. ("Capgemini"). TSDC-IT is located in Toronto, Ontario, Canada. This report describes the system within the TSDC-IT as it relates to the outsourcing service areas of Application Management ("AM") and Infrastructure Management ("IM").

The report is designed to provide information for use by the customers and their independent auditors who audit the financial statements of an entity that utilizes the TSDC-IT as a service organization. This document was prepared according to the guidance contained in AT Section 801, *Reporting on Controls at a Service Organization*, established by the American Institute of Certified Public Accountants, and the International Standard on Assurance Engagements 3402, *Assurance reports on controls at a service organization*, issued by the International Auditing and Assurance Standards Board ("ISAE 3402").

The information presented by the TSDC-IT in this Section III provides a description of operations and company level controls. Some operational information may not be relevant to a user organization's internal control.

The scope of the report is limited to the critical applications and the supporting infrastructure environment, defined by the TSDC-IT and agreed to by the user organization, based on their significance to the integrity of the user organization's financial reporting process. The scope of the report is also limited to the services that TSDC-IT is contracted to perform for the user entity.

The Business Process Outsourcing services provided by the Toronto Service Delivery Centre ("TSDC-BPO") are excluded from the accompanying description, and hence the assurance engagement did not extend to controls of TSDC-BPO. TSDC-IT, on a discretionary basis, uses Capgemini India to provide application programming, database support, and infrastructure management. TSDC-IT management is responsible for the execution of these controls on behalf of their customers for the in-scope applications, databases and infrastructure and they are included in the scope of this report.

TSDC-IT, based on contractual agreements, uses an infrastructure hosting service organization, CenturyLink, for certain of its IM services in support of server hosting for its customer. The scope of this report does not include physical security, environmental controls and backup management activities supported by CenturyLink.

TSDC-IT, based on contractual agreements, uses an infrastructure hosting service organization, Peer 1, for certain of its IM services in support of server hosting for its customer. The scope of this report does not include physical security and environmental control activities supported by Peer 1.

TSDC-IT Scope Overview

The table below depicts the control objectives that are in-scope based on the service provided.

	Related Control Objectives											
	Program Development	Program Changes		Access to Programs & Data			Computer Operations					PC Assets
Service	1	2	3	4	5	6	7	8	9	10	11	12
Applications Management	✓	x	✓	x	✓	x	x	x	x	x	x	x
Infrastructure Management	x	✓	x	✓	x	✓	✓	✓	✓	✓	✓	✓

✓ – In scope
x – Not applicable

The table below depicts the control objectives and the IT areas they address.

	Program Development	**Program Changes**	**Access to Programs & Data**	**Computer Operations**	**PC Assets**
	Control Objective 1	**Control Objectives 2-3**	**Control Objectives 4-6**	**Control Objectives 7-11**	**Control Objective 12**
Applications	✓	✓	✓	✓	**x**
System Software	**x**	✓	✓	✓	**x**
Network	**x**	✓	✓	✓	**x**
Database	**x**	✓	✓	✓	**x**
Physical Security	**x**	**x**	✓	✓	**x**
Personal Computing	**x**	**x**	**x**	**x**	✓

✓ – In scope
x – Not applicable

COSO (2013) Framework

Capgemini has defined Internal Controls based upon the “COSO” framework (Committee of Sponsoring Organizations of the Treadway Commission). The ‘COSO Internal Control – Integrated Framework (2013)’, adopted by Capgemini and Inergi is used in design and analysis of internal controls and for presentation in this report.

The Committee of Sponsoring Organizations of the Treadway Commission was formed to sponsor the National Commission on Fraudulent Financial Reporting, an independent private sector initiative which studied the causal factors that can lead to fraudulent financial reporting and developed recommendations for public companies and their independent auditors, for the Securities and Exchange Commission and other regulators and for educational institutions. In 2013, it published an updated ‘Internal Control – Integrated Framework’ which presents a comprehensive model and objectives for corporate internal control. The components are:

1. Control Environment
2. Risk Assessment
3. Control Activities
4. Information and Communication
5. Monitoring Activities

There is synergy and linkage among these components, forming an integrated system that reacts dynamically to changing conditions. The internal control system is intertwined with the entity’s operating activities and exists for fundamental business reasons. Internal controls are built into the entity’s infrastructure and are an integral part of the organization.

1. Control Environment

The control environment is the set of standards, processes, and structures that provide the basis for applying internal control across the organization. The Board of Directors and senior management establish the 'tone-at-the-top' regarding the importance of internal control including expected standards of conduct. Management reinforces expectations at the various levels of the organization. The control environment comprises the integrity and ethical values of the organization; the parameters enabling the board of directors to carry out its governance oversight responsibilities; the organizational structure and assignment of authority and responsibility; the process for attracting, developing, and retaining competent individuals; and the rigor around performance measures, incentives, and rewards to drive accountability for performance. The resulting control environment has a pervasive impact on the overall system of internal control.

As a multi-national player in the consulting, IT services and outsourcing markets, the Capgemini Group (the "Group") was built from a complex amalgam of businesses, skills, cultures and individuals. Bringing together these parts into a successful, coherent whole requires the support of a range of commonly adopted principles, values, policies and processes. These are set out in the Group Blue Book and in supporting documents, and are applicable to all parts of the business, except where specifically noted. To contribute to the current and future success of the Group, all the employees of the companies of the Group are expected to be familiar with the Blue Book, to actively adopt and to comply.

The Board of Directors of Capgemini represents all shareholders collectively. It determines overall strategies and oversees their implementation. All major strategic decisions and decisions material to the financial position or the commitments of the Group must receive prior approval from the Board of Directors.

The Board of Directors has established several specialized committees (the "Committees"), authorized and governed by the Board of Directors. They are responsible for examining or preparing matters falling within their terms of reference, making proposals and formulating opinions to the Board of Directors concerning decisions to be made by the Board of Directors. They have a consultative role only.

The Ethics & Governance Committee's first mission is to ascertain the conformity and results of actions implemented to ensure the promotion and respect of the seven core corporate values, notably the strict application of the Group's ethical principles, the practices related to the management of staff, the compliance of commercial partnerships and alliances with the values of honesty and freedom of judgment, in support of the Group's independence with commercial partnerships and alliances, and the application of prudential rules regarding relations with shareholders and financial markets, and information supplied to those stakeholders.

The Ethics & Governance Committee is also tasked more generally with overseeing the application of leading corporate governance practice within Cap Gemini S.A. and its main subsidiaries, including those in Canada.

Corporate Values

As Capgemini evolves, the seven values set out below remain vital to our development. They guide decision-making at a company and individual level, and we constantly strive to implement them in our work. Values are important for respecting, defending and upholding the Group as an ethical and responsible business and for protecting its reputation. The values are:

Honesty
Denoting integrity, loyalty, uprightness, and a complete refusal to use any underhand method to help win business or gain any kind of advantage. Growth, profit and independence have no real worth unless won through complete honesty and probity. Everyone in the Group should know that any lack of openness and integrity in business dealings will be penalized immediately once proven.

Boldness
Implies a flair for entrepreneurship, a desire to take considered risks and to show commitment (clearly linked to a firm determination to uphold one's commitments). This is the very soul of –competitiveness – making firm decisions and seeing them through to implementation, and being willing to periodically challenge one's direction and the status quo. Boldness needs to be combined with a certain level of prudence and a particular clear-sightedness, without which a bold manager can become reckless.

Trust
The willingness to empower both individuals and teams and to make decisions as close as possible to the point where they will be put into practice. Trust also means favoring open-mindedness as well as widespread idea and information sharing.

Freedom
Indicates independence in thought, judgment and deed, entrepreneurial spirit and creativity. It also means tolerance, respect for others and for different cultures and customs – essential qualities for an international group.

Team Spirit / Solidarity
Designates friendship, loyalty, generosity, fairness in sharing the benefits of group work; accepting responsibilities; and an instinctive willingness to espouse joint efforts even when the storm is raging.

Modesty
Signifies simplicity, the very opposite of affectation, pretension, pomposity, arrogance and boastfulness. Simplicity does not imply naivety, but is rather about being discreet, showing natural modesty and common sense, being attentive to others and taking the trouble to be understood by them. It is about being frank in work relationships, loosening up, and having a sense of humor.

Fun
Fun means feeling good about being part of the Group or of one's team, being proud of what one does, experiencing a sense of accomplishment in the search for better quality and greater efficiency, and feeling part of a challenging project.

Code of Business Ethics

Capgemini established an Ethics & Compliance Program in 2009. As a fundamental part of this program, Capgemini's values, rules and principles have been encapsulated in a formal Code of Business Ethics ("Code"). The Code aims to explain the behavior that is expected from all of Capgemini employees, while at the same time relying on the employee's wisdom, judgment, and adherence to Group principles. The Code also requires leaders within the organization to have additional responsibilities with respect to Business Ethics.

Ethics do not allow for compromise since ethical behavior is, by definition, non-negotiable. Every single employee in the Group, regardless of his or her position and level of seniority, should therefore be aware of and comply with the Code of Business Ethics. No matter where the company operates or whatever the economic circumstances are, the Code must be followed and it is mandatory for Group compliance. On an annual basis, employees are required to review the Code via on-line training. The goal of the online training is to help employees fully understand the Code and comply with its values and principles of action in their daily work. Completion of the training is tracked internally.

Group Anti-corruption Policy

Our Anti-Corruption Policy focuses on one of the standards set out in the Code of Business Ethics, in the "Bribery and Corruption" section. Its purpose is to help Group employees worldwide identify and avoid situations that could violate anti-corruption laws. It is written in a simple and practical manner, and it informs Group employees of what they can and cannot do and where to find support. The Policy document explains what is considered as corrupt business practices, and also provides detailed practical guidance along with certain "do's" and "don'ts". This Policy also extends to the Group's relationships with third parties and suppliers.

Capgemini employees at all levels and at all locations are required to comply with the requirements of the Policy. The Policy document together with guidelines, training material and frequency asked questions ("FAQs") are made available to all the employees through the Ethics and Compliance Hub on the Talent intranet.

Raising Concern Procedure

The procedure for reporting concerns is mandated by Cap Gemini S.A. and implemented in each country in which the Group and all of its subsidiaries operate and is intended to operate in conjunction with the Code of Business Ethics. This procedure applies to all employees and is designed to be a readily available means for reporting concerns through internal channels. Furthermore, this procedure is designed to provide protections to all employees who report concerns in good faith, and to promote a workplace environment in which employees can raise concerns free from fear of retaliation.

The Raising Concern Procedure is intended for the reporting of concerns with regard to possible misconduct, fraud, wrongdoings, breaches of policies (including but not limited to the Code and the Blue Book referred to above), laws or regulations (including irregularities in accounting, auditing or banking matters, bribery, unfair competition or improper financial reporting related to the business of the Group and/or Company), or where the interests of the Group and/or Company or health and safety of any employee is at risk. The procedure provides a confidential mechanism for reporting concerns to the

North America Ethics & Compliance Officer or a lawyer in the North America Office of General Counsel, by submitting an email or placing a call into a "Whistleblower Hotline". The procedure is posted on the internal intranet, and an annual reminder is sent out to employees.

For reports made under the Raising Concern Procedure, a preliminary assessment is conducted to determine the appropriate course of action. The Regional Ethics & Compliance Officer will either instruct the Internal Audit Department or other appropriate person to conduct an investigation. The Company, if possible, will acknowledge receipt of the reported concern to the reporting individual. During the investigation, the Company will always respect principles of fairness.

Human Resources

Human Resources maintain current policies and procedure through standard annual updates or more frequently as needed. These policies are updated and available to the TSDC IT employees (i.e., full-time and contract) via the internal intranet.

The Capgemini Human Resources department has defined formal hiring policies and guidelines that assist in selecting qualified applicants for specific job responsibilities. Hiring policies require minimum education and experience based on position. Applicants must submit completed application forms, references, and a resume.

Performance reviews, in which employees are evaluated based on the responsibilities of their particular job, are conducted on an annual basis. All employees are expected to meet performance and attendance standards and to follow TSDC-IT policies and procedures.

Code of Conduct

All employees are issued the Capgemini employee handbook upon employment. The Capgemini Code of Conduct is detailed within the handbook. The Capgemini Code of Conduct is also available for review on the intranet; thus making it readily available to all employees for review.

Upon initial employment, all employees are issued the Acceptable Use of Information Technology and Telecommunications policy. All new employees are required to read the policy upon initial employment. Third party contracting agencies are required to sign master service agreements, which address confidentiality and customer information.

TSDC-IT new hires are required to sign offer letters that include their acknowledgement and understanding of the Code of Conduct and confidentiality standards/requirements for TSDC-IT and customer information.

Capgemini Canada Leadership Team

Capgemini Canada Senior Management Team is accountable for the:

- Application Services and
- Infrastructure Services

The TSDC-IT Senior Management Team provides tactical and strategic oversight for the organization. The centre's Senior Management Team is responsible for all aspects of centre delivery and works directly with Capgemini's Account Management Teams in meeting customer service expectations. This TSDC Senior Management Team meets monthly to discuss current organizational issues, set policy, and maintain cross-functional communication and synergy. The TSDC-IT Senior Management Team consists of all Line of Business ("LOB"), Leads from Infrastructure Management, Applications Management, IT Security, Project Delivery, Human Resources, Business Process Outsourcing, Account Management and Corporate Finance.

The Senior Management Team:

- Provides strategic direction to the service delivery organization;
- Provides business specific guidance for key initiatives and support requirements;
- Establishes the total IT investment (i.e., capital and operating expenses);
- Reviews and manages performance against operating and capital budgets; and
- Reviews and sponsors performance of major projects and transitions;
- Manages day-to-day tactical delivery operations/service levels.

The organizational structure of TSDC-IT is formally documented and updated when necessary to provide for adequate segregation of duties within the TSDC-IT and across the organization. Roles and responsibilities for personnel have been formally documented. The fundamental principles that govern the relationship which the TSDC-IT wishes to build with its employees can be summarized as follows:

- All employees will be given an annual performance review, as well as the opportunity to discuss its content in an individual interview.
- All employees are entitled to a personalized development plan indicating training options.
- All employees will have the opportunity, if they so wish, of benefiting from the help of a mentor with whom to discuss their career path.
- All employees will regularly be able to voice their opinion through a survey on overall trends concerning the company and, more specifically, on professional development.
- All employees will be regularly informed by their managers and should be able to engage in dialogue concerning their assignments and work environment.

Training and Development

Particular attention is paid to the training of executives, account managers, and project leaders, as they play a key role in defining and implementing Capgemini's strategy. Capgemini's training policy uses a common global system called 'MyLearning', for which all Capgemini employees worldwide can register. This includes a catalog of courses available either in the form of e-learning or as classroom teaching. The cornerstone of Capgemini's international training activities is its University at Les Fontaines, near Paris. The curriculum is focused on the most advanced skills development programs in order to ensure the most thorough grounding in new technologies and business practices.

Each manager is accountable for providing adequate practical instruction and supervision, and for the monitoring of training and educational courses. Each employee is responsible to undertake training and development to meet skill and competency requirements as developed and approved in a Personal Development Plan. Capgemini Human Resources policies, standards, processes and tools, available on the intranet, create the necessary infrastructure to help guide the manager and the employee in training and development activities. During the year, informal periodic performance reviews are conducted to ensure progress is being made against manager and employee goals.

DELIVER™ Methodology – Quality Management System

As Capgemini acquires knowledge in the delivery of its services to our customers, it is imperative that this knowledge and experience be shared and reused, thus benefiting all our professionals and clients. The result is improved productivity through reuse, simpler and more reliable solutions, shorter lead times and lower risks.

DELIVER™, the Capgemini Global Methods Environment, is a vehicle supporting this knowledge sharing. It reflects the quality policy and key principles to achieve quality goals and ensure effective delivery and client satisfaction. DELIVER™ is consistently deployed and used throughout our organization, ensuring common processes, training and capture of best practices worldwide. All our professionals apply DELIVER™ basic principles and common approaches to improve both local and global performance. It supports service offerings by providing frameworks, methods, techniques and tools for managing and delivering all types of programs, projects and services.

The DELIVER™ methodology provides the global framework for our Quality Management System ("QMS"). Capgemini's QMS Process Hierarchy drives global industrialization while allowing tailoring to meet the specific business requirements of our clients.

The TSDC-IT strives to deliver better, faster and more sustainable results to its customers based on processes and standards aligned with:

- International Organization for Standardization ("ISO");
- IT Infrastructure Library ("ITIL"); and
- Project Management Institute's Project Management Body of Knowledge ("PMBOK").

Evidence of Effectiveness

The TSDC-IT is diligent in maintaining quality system records to evidence our practices and facilitate effective/efficient audits. In the outsourcing areas of Infrastructure Management and Applications Management, the Centre has hosted audits focusing on security (i.e., logical and physical), the American Standard AT Section 801, and the International Standard on Assurance Engagements 3402 ("ISAE 3402"). Appropriate actions are taken to address identified control improvement opportunities, with customer involvement, as required.

Security Incident and Response

Capgemini has formal information security policies and procedures. These documents address policies such as Acceptable System Usage, Physical Security, Logical Security, and Access Creation. All personnel are made aware of these policies upon their arrival at Capgemini. Employees are held accountable for acting in accordance with policies and defined practices. The Capgemini corporate commitment, evidence through the Security Standard, ensures critical systems and information remain secure.

The Security Standard states that all users will remain alert for and report apparent violations. Any person may initiate an investigation by following the Incident Management process as appropriate. In the event that the investigation should be kept confidential, the investigation can be initiated by contacting the security manager. Each investigation and its resolution will be documented in the case handling tool if the investigation is not considered to be confidential. Confidential investigations will be documented and filed with the security team.

When conducting any investigations into actual or suspected security breaches either for Capgemini or on the behalf of a customer, the following actions are performed.

- When the security team is contacted to conduct an investigation, the Security Manager immediately sends an e-mail to the Office of General Counsel (“OGC”) and copies the Security Manager of Americas Outsourcing to inform them of the request.
- The Security Manager / Security Team then works in concert with, and at the direction of, the OGC.
- A team involving appropriate personnel and representation from OGC will be established to conduct the investigation.

Whenever evidence shows that Capgemini has been victimized by a computer or communications crime, a thorough investigation is performed. This investigation must provide sufficient information so that management can take steps to assure that: (1) such incidents cannot reasonably take place again, and (2) corrective security measures can be accomplished.

The Security Policy states that all managers of the TSDC-IT information and computing resources will take reasonable and cost-effective steps within the scope of their responsibility and authority to preserve the availability and confidentiality of these resources. Implementation of this policy contributes to the realization of the following business and management objectives:

- Assure the continued availability of the TSDC-IT and customer information resources to support lawful business activities;
- Preserve the integrity of our business information to support high quality services and effective decision-making;
- Preserve the confidentiality of sensitive information resources;
- Establish clear accountability for the management and use of the TSDC-IT information resources;
- Assure the implementation of reasonable, cost-effective, and consistent information security controls and procedures throughout the TSDC-IT and its information technology systems and networks; and
- Promote user awareness and understanding of the risks associated with the TSDC-IT information resources.

The Centre’s intranet facility is used to store and manage all TSDC-IT and customer security related policies, procedures, standards, and work instructions.

2. Risk Assessment

Risk assessment involves a dynamic and iterative process for identifying and analyzing risks to achieving the entity's objectives, forming a basis for determining how risks should be managed. Management considers possible changes in the external environment and within its own business model that may impede its ability to achieve its objectives.

Capgemini identifies the risks associated with their outsourcing services. From the initiation of a new technology, service or customer environment into the system, to changes to the existing system, risks are mapped to internal controls to determine whether risks have been appropriately mitigated. Management accountability is assigned for each risk and control identified. These risks are categorized based upon impact to the client's financial systems. Key risks are communicated and closely monitored to mitigate potential failures. Service Delivery Leads and Capgemini North America Assurance Manager meet frequently to review status of management controls over the system. Through the Account Management channel, Capgemini communicates with its key customer contacts to better understand the customer's risk and jointly plan to mitigate the risks.

The Capgemini North America cross-functional Compliance Council proactively monitors and mitigates delivery risk at an operational level. The Council promotes the sharing of information and collateral between functional areas such as: Regulatory & Compliance, Security, IT Controls, Export Compliance, Privacy, Risk Management, Legal and the delivery executives. By enhancing leadership visibility to operational risks and compliance issues, the council increases compliance accountability within ITO delivery and enhances service quality.

3. Control Activities

Control activities are the actions established by the policies and procedures to help ensure that management directives to mitigate risks to the achievement of objectives are carried out. Control activities are performed at all levels of the entity, at various stages within business processes, and over the technology environment. They may be preventive or detective in nature and may encompass a range of manual and automated activities such as authorizations and approvals, verifications, reconciliations, and business performance reviews.

TSDC-IT control objectives and related controls are included in Section IV of this report, "Toronto Service Delivery Centre – Information Technology Outsourcing's Control Objectives and Control Activities; and PricewaterhouseCoopers LLP's Description of Tests of Controls and Results ", to eliminate the redundancy that would result from listing them in this section and repeating them in Section IV. Although the control objectives and related controls are presented in Section IV, they are, nevertheless, an integral part of the TSDC description of controls.

Capgemini's AM and IM outsourcing services information technology general control system is designed with the customer financial reporting in mind. The specified control objectives are representative of information system general computer controls that support user entities' financial statement reporting processes and that are consistent with Capgemini's contractual obligations. The supporting control activities have been designed to address the identified risks of not achieving the key conditions identified in each respective control objective. The respective control activities have been designed to include a mix of preventive and detective activities.

System Development and Implementation Related Controls

Capgemini has a control objective covering the system development and implementation which is covered in Control Objective 1. The associated control activities are presented in Section IV.

Capgemini has established a System Development Life Cycle methodology ("SDLC") for managing system development and implementation. The SDLC methodology emphasizes the below noted stages:

- Initiation;
- Requirements Development and Management;
- Estimate and Planning;
- Solution Development;
- Deployment; and
- Closing

Each stage is broken into a number of activities that are comprised of detailed tasks.

Program Change Related Controls

Capgemini has control objectives covering the program change environment for Hardware, System Software and Application environments; Control Objectives 2 and 3. The control environments are represented in Section IV.

Capgemini has adopted a Change Management Policy to ensure that only necessary changes are introduced into production and that appropriate levels of testing, planning, communication, and review accompany the introduction of such changes, for Hardware, System Software and Application environments. This Change Management Policy outlines the project methodology that the TSDC-IT customer has adopted and requires all teams to follow.

There are a number of formal stages that a Change must progress through before it is allowed to 'go-live'. The process is flexible to accommodate all types or timings of Changes (e.g., Normal Changes, Standard Changes, Expedited Changes, and Emergency Changes).

Process stages include:

- Change Initiation and Recording
- Change Review and Authorization
- Change Planning and Scheduling
- Change Implementation
- Change Completion and Closure

This process outlines each of the stages above and includes a continuous improvement stage for the change management process. Each stage is broken into a number of activities that are comprised of detailed tasks.

Capgemini uses BMC Remedy IT Service Management Suite ("ITSM") to manage the lifecycle of all changes to production systems, and to track changes made to test and development systems.

Security Access Administration

TSDC has control objectives specific to both logical and physical security access. Within logical access, TSDC has separated the control objectives into network administration or Active Directory environments and operating system logical access, application layer logical access, and database logical access. TSDC employees require a higher level of access, or privileged access, than the traditional end-user of a financial application. TSDC defines privileged access as rights or permissions that allow TSDC outsourcing services IM and AM employees' access to control, monitor, and administer respective customer systems.

For those customers for which the TSDC administers end user access, requests such as set-up of access, disabling of accounts and password resets are managed by TSDC. Customers retain responsibility to ensure that customer employee access requests are appropriately authorized and related customer access profiles are appropriately designed. Management recognizes that effective controls over logical user access are a critical component to maintaining effective security over customer information.

The TSDC manages access for its employees, ensuring access privileges are aligned with job functionality and that access requests are appropriately authorized. The TSDC's resource management practices require that functional managers notify the Service desk promptly regarding any staff terminations or transfers. In addition, TSDC Human Resource Management provides the centralized managed Identity, Credentials and Access Management ("ICAM") team a system generated, daily termination file to initiate off boarding of TSDC employees from TSDC and customer environments. The ICAM team ensures incident tickets are raised through the Service Desk and monitors completion of those incident tickets.

TSDC is responsible for physical security, and has ensured physical and environment controls are in place at the Capgemini-managed data centres. Data centre access is limited to authorized staff. All authorized staff require an access card to obtain access to the raised-floor environment. Visitors to the data centre require temporary access cards and must be escorted by Capgemini staff.

Environmental controls for the Capgemini-managed data centre facilities ensure computer systems are protected from physical damage. Key components of the environmental protection include fire protection, detection and suppression systems; raised floors; uninterruptible power supply systems; and temperature and humidity monitoring devices.

Operations

Demand and Capacity Thresholds

Capgemini proactively sets capacity thresholds in agreement with client representatives. When capacity thresholds occur, the event generates an incident ticket. Incident tickets are reviewed to identify trends and in conjunction with the client, determine if additional actions should be taken for the system environment.

Back-up and Recovery

Back-up and recovery is the performance of system back-up, restoration and disk storage. This includes support, implementation and design of back-up procedures. There are daily, weekly, monthly and yearly back-up copies performed on critical data and program files.

Monthly and yearly back-up storage media is transported to physically and environmentally controlled off-site storage, Iron Mountain, with access restricted to authorized individuals only.

Daily back-up media utilizes disk technology which reduces requirements to ship tapes to Iron Mountain. TSDC-IT uses EMC Data Domain de-duplication appliances which replicate back-up images from the primary data centre to secondary data centre depending on customer's primary location. Secondary back-up image on disk is a replacement for sending tapes to Iron Mountain for off-site storage.

As TSDC-IT has implemented the daily back-up to disk technology, Iron Mountain tape media pickups have been reduced to Wednesday's only.

Batch Processing

Batch processing provides planning, scheduling and monitoring of interface or automated application run jobs that support the financial system. Batch scheduling tools are utilized to set and maintain the schedule frequencies. Changes to the schedule follow the incident management lifecycle.

Incident Management

The Capgemini definition of Incident Management is "The Process responsible for managing the Lifecycle of all Incidents". The primary objective of Incident Management is to return the IT Service to Customers as quickly as possible. The Standard Incident Management Lifecycle is broken into five stages:

- Incident Detection and Recording
- Incident Classification and Initial Support
- Investigation and Diagnosis
- Resolution and Recovery
- Incident Closure

Each stage is broken into a number of activities that are comprised of detailed tasks.

Major Incidents

A handover occurs from Incident Management to Major Incident Management when Incidents are recognized as having a severe business impact and at this point the Major Incident Management Procedure will be invoked. Although Major Incidents still follow the normal incident life cycle, the triggering of the Major Incident procedure provides the increased coordination, planning, escalation, communication, and resources that these incidents require. The Major Incident procedure identifies the detailed instructions of how to execute outage management, the Major Incident Response Team ("MIRT") and notification.

SLA Measurement, Analysis, and Reporting

TSDC-IT has implemented a formal Service Level Management ("SLM") process. Service level management provides for continual identification, monitoring and review of the levels of IT services specified in the Service Level Agreements. The SLM process provides for a formal contract management process to add or modify Service Level Agreements.

The Customer Service Level Agreements ("SLA") describe target service levels to be achieved, how they are to be measured, and the assumptions on which they are based. An SLA is an agreement that specifically relates to quantitative levels of performance (i.e., Service Level) for certain specified services. Capgemini is contractually obligated to monitor performance against SLAs, report SLA performance monthly, and achieve defined SLA service levels. Successful SLA measurement results in improved centre operations and customer satisfaction.

SLAs are managed daily with the summaries of Incident Management and statistics available to the TSDC-IT Service Delivery Managers and Team Leads. Standard customer reporting is published on secured customer web portals by the Centre's Measurement and Analysis Team.

Problem Management

The goal of Capgemini's Problem Management process is to minimize the adverse impact of Incidents on the business and to prevent recurrence of Incidents. In order to achieve this goal, Problem Management seeks to get to the root cause of Incidents and then initiate actions to improve or correct the situation.

Problem management supports Incident Management via inputs from trending analysis of Incidents, identifying recurring Incidents and responding to major Incidents. Whereas Incident Management is focused on getting the Customer back up and running as soon as possible (resolving that occurrence of the Incident), Problem Management focuses on identifying and resolving the underlying root cause of the Incidents.

The standard Problem Management lifecycle is broken into four stages for Problem Investigation and a further two stages for Known Error control activities:

- Proactive Problem Management
- Problem Identification, Recording, Prioritizing, Classification and Review
- Problem Investigation and Diagnosis
- Known Error Identification and Recording, Classification and Assessment
- Known Error Resolution and Closure (Error Control)
- Problem Resolution and Closure

Each stage is broken into a number of activities that are comprised of detailed tasks.

PC Assets

PC Asset Inventory Tracking

Order

Submit Order	Receipt Against PO	Receive Physical PC Asset	PC Assets Stock Management	Initial PC Asset Deploy
x	x	✓	✓	✓

Deploy

✓ – In scope
x – Not applicable

TSDC-IT's Distributed Desktop Services ("DDS") team and the Service Management Group ("SMG") are the primary groups executing these controls.

Within the SMG team, the Asset Managers have the responsibility to update the ITSM Configuration Management Database ("CMDB") based on the information provided from the DDS team. The Asset Managers are also responsible to conduct monthly reconciliations of the physical inventory in the Trinity and Clegg Road Depots against the 'in stock' or 'received' inventory record in the CMDB.

Within the DDS team there are segregated roles that perform the various functions. These roles are:

Depot Logistics Clerk
The Depot Logistics Clerks record the packing slip and serial numbers information in the ticketing system when the assets are received at the Depot. They inform the Asset Managers when assets should be added to the CMDB with a status of 'in stock' or 'received'. The Depot Logistics Clerks also release assets from the Depot and inform the Asset Managers when assets should be updated to an 'in transit' status in the CMDB.

IT Technicians
- Verify that the count matches the packing slip, sign and date the packing slip.
- IT Technicians accept the assets from the Depot to be installed.

TSDC-IT's DDS Lead or Manager
- Verify that the count matches the packing ship, sign and date the packing slip.
- TSDC-IT's DDS Lead or Manager conducts a physical inventory of the PC assets in the Trinity and Clegg Road Depots.
- TSDC-IT's DDS Lead or Manager manages variances identified by Asset Managers during reconciliation.

Submit Request

Initiating a Shipment

TSDC-IT's Depot Logistics Clerks, IT Lead and/or IT Manager notifies TSDC-IT's client if Laptops, Tablets, Desktops or Printers are needed to replenish stock in the depot. Release of shipments from TSDC-IT's client's vendors to either Trinity or Clegg Road will be made by TSDC-IT's client.

TSDC-IT's client initiates the request for new PC assets to be shipped to the depot via a Purchase Order Release or other means of communication to release PC Assets from a Virtual Warehouse. The procurement process is retained by TSDC-IT's client.

Receive Physical PC Asset

The Receiving a PC Asset work instruction defines the steps necessary to receive, confirm receipt and provide the required receiving data for an asset procured by TSDC-IT's client. This asset information will be used to facilitate asset tracking throughout the IT Asset Lifecycle. This applies to new PC assets arriving at either the Trinity Depot or Clegg Road Depot.

TSDC-IT's Depot Logistics Clerk will open an ITSM Incident Request ticket to document that the shipment has been received. The ITSM Incident Request ticket will contain a scan of the packing slip that has been signed and dated by the TSDC-IT Resource who physically received the assets and validated the quantity of items on packing slip against the actual assets.

TSDC-IT's Depot Logistics Clerk will also open an ITSM Change Request ticket to notify the Asset Manager to register the new asset in the Asset Configuration Management Database ("CMDB").
TSDC-IT's Depot Logistics Clerk will complete the Asset Add and Update template and attach it to the Work Info tab of the ITSM Change Request ticket.

Match of Packing Slip to Equipment Received

TSDC-IT's Depot Logistics Clerk, IT Technician, IT Lead and/or IT Manager will verify total quantities received against those listed on Packing Slip(s) to verify items on the Packing Slip(s) are received in the ordered quantity. TSDC-IT's Depot Logistics Clerk verifies that the items received are not damaged.

Update Asset Information in CMDB

ITSM Change Requests are reviewed by the TSDC-IT Change Manager to validate the information is complete. The Change Manager will then assign the ITSM Change Request to the Asset Manager, directing them to update the Asset Database, assigning a status of "In Stock" or "Received" to the assets that have been received. On a weekly basis, Manager, Service Management Group reviews the status of open change orders and follows up with relevant people for timely action.

PC Asset Order Exception

TSDC-IT's client is responsible to ensure that all orders placed have been received by TSDC-IT.

If items are damaged, missing from the order or if more items are received than were ordered, TSDC-IT will identify each exception on the packing slip, sign and date the Packing slip and send a scanned copy via email to TSDC-IT's client. The ITSM Incident request ticket will also be updated with this information.

If no packing slip is received with the order, TSDC-IT will document any issues in an email to TSDC-IT's client with the Incident request number, if known, in the subject line of the message.

PC Asset Orders with exceptions will be received but quarantined until further information is received from TSDC-IT's client.

Receive Against PO

TSDC-IT's client is responsible for the completeness and accuracy of goods receipted through SAP and to provide complete and accurate instructions to TSDC-BPO to perform Goods Receipt in SAP.

TSDC-IT's client is responsible for reconciling the PC Assets received by TSDC-IT in the Trinity Depot and the Clegg Road Depot to the PC Assets ordered based on information provided from TSDC-IT.

Initial PC Asset Deployment

Request for Asset Deployment

A request for PC Asset Deployment may originate from TSDC-IT or TSDC-IT's client. The request is initiated as an ITSM Incident Request ticket that is assigned to a TSDC-IT queue.

Place Asset 'In Transit'

TSDC-IT Depot resource will locate the appropriate PC Asset from the depot, and transfer the asset to the appropriate party. The ITSM Incident Request ticket will be updated to indicate that the asset has been removed from the depot.

TSDC-IT Depot resource creates a request to change the status of the asset, using the Field Engineer Console or Change Management Console, based on the Incident Request for PC Asset Deployment. This request to change status will be reviewed by the Change Manager to validate the information is complete when utilizing the Change Management Console and reviewed by the Asset Manager when utilizing the Field Engineer Console. The Asset Manager changes the status to "In Transit" for the assets that have been removed from the depot.

Once the equipment has been installed by an IT Technician the technician submits a request to change the status of the asset to 'deployed'. When equipment is received directly by end user (without IT Technician involvement) an email notification or deployment sheet is attached to the ticket, the depot logistic clerk submits a request to change the status of the asset to 'deployed'.

PC Assets Stock Management

Verify Physical Inventory

A physical inventory of the assets in Trinity and Clegg Road Depot is performed and reconciled to the 'in stock' and 'received' assets in the Assets Configuration Management Database ("CMDB") on a monthly basis. The reconciliation is signed off by TSDC-IT management.

Any discrepancies identified in the reconciliation will be investigated and addressed by the Asset Manager within 120 days.

Every month the Asset Manager will create an ITSM Incident Request ticket and request the depots to conduct a physical count of physical assets. The IT Leads / IT Managers conduct a physical inventory count of assets in stock at the Clegg Road and Trinity depots and enters the physical stock items into an excel spreadsheet. This information is attached into the ITSM Incident Request ticket. The Asset Manager extracts a CMDB Report of assets in 'in stock' and 'received' status. The Asset Manager performs a comparison between the physical inventory items spreadsheet against the CMDB Report. Any discrepancies that are identified are forwarded to the Director, Service Management Canada, for review, investigation and follow up. Items that remain as discrepancies are communicated to TSDC-IT's client within 120 days.

4. Information and Communication

Information is necessary for the entity to carry out internal control responsibilities in support of achievement of its objectives. Communication occurs both internally and externally, and provides the organization with the information needed to carry out day-to-day internal control activities. Communication enables personnel to understand internal control responsibilities and their importance to the achievement of objectives. Capgemini has a Group Communication Department which manages and monitors group-wide internal and external communication including key external publications and Annual Reports.

All Capgemini centres are part of a global service network and are consequently part of a global information and communication network. Formal corporate communications begin at the office of the Chief Executive Officer, with regular company-wide communications and formal regional communications that are customized for each geographic/operational location and business unit. The communication framework provides for two-way communication that includes distribution of the corporate and operational unit organization structure, and allows upward communication, including the results of periodic employee feedback surveys.

New customer integration risks are identified prior to the establishment of any new contract through team-based solution design and mandatory pre-contracting solution, risk and contract economic reviews. These communication structures are retained throughout the transition period and into the delivery phases of contract services. Routine communications of risks, operational performance, economic performance and customer satisfaction provide the fundamental information and communication structures and linkage of centre performance and operational and executive management of Capgemini.

Customer Satisfaction is the process of continually assessing the relationship with each customer at various levels with the goal of 'On Time & Above Customer Expectations' ("OTACE"). Capgemini OTACE measurement and continuous local assessment of satisfaction with its customer performance for project deliverables comprise the customer satisfaction measurements. Customer comments are followed-up by the Account Management Team as appropriate. The Service Desk facilitates a survey process with customers when an incident ticket is opened. Service Management analyzes the data and provides management with summary information.

The TSDC-IT distributes strategic and operational issues on a weekly basis to centre managers via the 'Weekly Update'. This information is then distributed to all associates of the centre through individual group or team meetings. Appropriate follow-up is performed based on communication with the customer and/or review by the TSDC-IT Leadership. The TSDC-IT also holds regularly scheduled all-associate meetings to communicate centre-specific and corporate-level information.

5. Monitoring Activities

Ongoing evaluations, separate evaluations, or some combination of the two are used to ascertain whether each of the five components of internal control, including controls to affect the principles within each component, is present and functioning.

Operations and controls are monitored for each customer at the customer management, quality assurance, service line management and Regional Chief Operating Officer ("COO") levels.

> **Account Management** – Upon completion of the contract, service level and quality monitoring processes are established to monitor and manage service level and quality performance as defined. The Account Management Team also establishes the OTACE customer satisfaction criteria in consultation with the customer.
>
> **Quality Assurance** – For all contracts that meet certain size and complexity criteria, a Quality Assurance Reviewer, independent from the Delivery Team and independent of the Delivery Centre, performs a periodic review of all aspects of service delivery included in the contract. The quality assurance process, which includes direct interviews with key customer personnel, includes assessment of delivery risks and mitigation plans associated with the contract.
>
> **Service Line Management** – Management of the Delivery Centre routinely monitor reporting of service level and quality measurements, quality assurance review reports, and customer satisfaction results.
>
> **Region COO** – The Region COO maintains a dashboard of quality assurance review results and customer satisfaction results for all centre customers and periodically reviews those results with the centre manager. The Regional COO also conducts monthly meetings with the leaders of each centre to discuss centre results, and customer and organizational information relevant to centre performance. The Regional COO has established an escalation protocol to assure that he is informed on a timely basis of any significant issues.

Monitoring of risk to the AM and IM information technology general control system is top of mind of TSDC management and supervisory personnel. The TSDC has identified control owners for processes within the AM and IM information technology general control system to ensure appropriate oversight exists for the environment and that controls remain to operate effectively. TSDC management and supervisory daily operational activities are the key to this process. The daily activities include a mix of operational oversight procedures that include daily operations meetings and key incident management reporting reviews. Exceptions to normal activities are documented, reported and resolved. As required, TSDC-IT utilizes Service Delivery Escalation procedures to inform customer contacts of exceptions to daily activities. The TSDC-IT intranet is updated on a regular basis as standards, procedures, and controls change.

Capgemini management and supervisory personnel also serve as critical monitoring components when new risks are introduced into the AM and IM information technology general control system, via events such as the implementation of new technology**.** These resources are responsible for providing appropriate oversight to ensure the AM and IM information technology general control system remains designed appropriately and is operating effectively to mitigate the new risks.

TSDC daily operational activities are the key to this control environment. TSDC-IT management and supervisory personnel monitor the quality of internal controls as a normal part of their activities. Standard monitoring activities and use of industry tools to track incidents, changes and problems are key to the TSDC's ability to support the user entities' financial reporting requirements. Exceptions to normal activities are documented, reported and resolved. The TSDC-IT Intranet is updated on a regular basis as policies, procedures, and controls change.

Capgemini has implemented policies and procedures around protecting its confidential information and intellectual property. Capgemini management and supervisory personnel are expected to take necessary steps to protect any assets and resources of the company which are under the company's control against loss, theft and unauthorized disclosure.

Monitoring of the Subservice Organizations

TSDC-IT uses the dedicated infrastructure hosting services service organization, CenturyLink, to support a portion of its server hosting services. TSDC-IT management and data centre service personnel meet monthly with CenturyLink to review changes, planned maintenance, security and data centre operations at the location. These meetings are used to evaluate scheduling, change ticket requirements, risk and any potential impact to TSDC-IT operations prior to planned maintenance and also as follow up of completed work. In addition, TSDC-IT management receives and reviews routine service level reports from CenturyLink, and an independent annual third party service Type 2 Report completed in accordance with SSAE 16 to determine whether relevant physical security, data centre environmental control and backup management control activities are operating as expected and that any deviations from expectations are resolved appropriately.

TSDC-IT uses the dedicated infrastructure hosting services service organization, Peer 1, to support a portion of its server hosting services. TSDC-IT management and data centre service personnel meet monthly with Peer 1 to review changes, planned maintenance, security and data centre operations at the location. These meetings are used to evaluate scheduling, change ticket requirements, risk and any potential impact to TSDC-IT operations prior to planned maintenance and also as follow up of completed work. In addition, TSDC-IT management receives and reviews routine service level reports from Peer 1, and an independent annual third party service Type 2 Report completed in accordance with SSAE 16, to determine whether relevant physical security and data centre environmental control activities are operating as expected and that any deviations from expectations are resolved appropriately.

Complementary User Entity Controls

The associated control policies and procedures performed by TSDC-IT address only a portion of the overall internal control structure of each TSDC-IT customer. It is not feasible for the control objectives related to the processing of transactions to be solely achieved by TSDC-IT. As such, TSDC-IT has provided 'Complementary User Entity Controls' in this section of the report.

Therefore, TSDC-IT's customer must evaluate its own internal control structure in conjunction with the control policies and procedures in the information provided by TSDC-IT.

The lists of complementary user entity controls presented below do not represent a comprehensive set of all the controls that should be employed by user organizations. Other controls may be required at user organizations.

1. The customer is responsible for ensuring they meet their requirements and obligations as outlined in their respective outsourcing agreement. (Control Objectives 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, and 12)

2. The customer is responsible to ensure timely and complete communication of any changes to requirements that may impact the data centre processing service provided. (Control Objectives 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, and 12)

3. The customer is responsible for providing the TSDC-IT with a list of customer personnel with authorization to approve changes and user access to applications, databases, and operating systems, as necessary. (Control Objectives 1, 2, 3, 4, 5, and 6)

4. The customer is responsible to inform TSDC-IT on a timely basis of any changes to individuals authorized to instruct the TSDC-IT on a customer's behalf. (Control Objectives 1, 2, 3, 4, 5, and 6)

5. The customer is responsible to ensure only appropriate projects are initiated and to ensure the decisions to 'go-live' with the system is made by appropriate management and approved prior to implementation. (Control Objectives 2, 3, 6 and 10)

6. The customer is responsible for ensuring requests for changes to applications, databases, and operating systems are appropriately authorized. (Control Objectives 2, 3, 6, and 10)

7. The customer is responsible for user acceptance of changes and establishing sufficient controls to test all software changes for upgrade/replacement functional capability. (Control Objectives 2, 3, 6, and 10)

8. The customer is responsible to ensure that sufficient controls are in place to ensure that TSDC-IT is notified of all employee changes (i.e., terminations or transfers) so that access privileges to systems may be removed or changed. (Control Objectives 4 and 5)

Complementary User Entity Controls (continued)

9. Where TSDC-IT provides the infrastructure, and the customer or a third party contracted by the customer provides the application software changes, the customer is responsible to ensure that sufficient controls exist over application security, application change management (i.e., including baseline-type reviews) and application problem management, system development and security monitoring. (Control Objectives 3, 4, 6 and 7)

10. The customer is responsible for ensuring physical security and environmental controls are in place surrounding all computer processing environments at the customer site. (Control Objectives 11)

11. The customer is responsible to ensure that sufficient controls are in place to ensure that all customer employee access requests to the environment, including special privileges, are documented and appropriately authorized only as job function needs dictate. (Control Objectives 4, 5 and 6)

12. The customer is responsible for reviewing system usage and performance reports produced by TSDC-IT and distributed periodically to each customer. (Control Objectives 7 and 9)

13. Where the customer retains responsibility for monitoring of inactive Windows/LAN accounts, the customer is responsible to review and notify TSDC-IT of any actions required. (Control Objective 4)

14. For security monitoring activities, beyond incident and problem management where TSDC-IT has been contracted to perform such activities, the customer is responsible for establishing and maintaining effective security monitoring controls (e.g., monitoring of security logs as provided by TSDC-IT). (Control Objectives 4, 5, and 6)

15. The customer is responsible to ensure appropriate business process controls are implemented to monitor unauthorized data changes (e.g., review of database logs providing access activity for critical data) and completeness and accuracy of processing. (Control Objectives 6 and 10)

16. For selected applications, the customer organization retains responsibility for performing application baseline reviews, which support the integrity of the change management process at TSDC-IT. (Control Objective 3)

Complementary User Entity Controls (continued)

17. Where Security Exemption Forms are approved by the customer, the customer accepts responsibility for analyzing and accepting the associated risks. (Control Objectives 3, 4, 5 and 6)

18. The customer is responsible for reviewing their employee access within the applications to ensure that access remains appropriate. (Control Objective 5)

19. For SAP user access provisioning, the SAP GRC Access Control tool is used by TSDC-IT's customer who is responsible for the:
    - approval of roles that can be assigned to users within SAP and the verification that authorities are appropriately assigned to and segregated within and between roles (i.e., via profiles, t-codes, objects), including permitted roles and combinations of roles per function communicated to TSDC-IT;
    - completeness and accuracy of the groups included in the SAP user access reports provided to TSDC-IT for their periodic user access reviews included in the SAP user access reports provided to TSDC-IT for their periodic user access reviews, including composite roles, simple roles and t-codes assigned to users, providing access levels and segregation of duties; and
    - identification and approval of segregation of duties authorities within and between roles that are assigned to users within SAP, and, in the case of approved excessive access or segregation of duties conflicts, notification thereof to TSDC-IT.

20. The customer is responsible for the completeness and accuracy of goods receipted through SAP and to provide complete and accurate instruction to TSDC-BPO to perform 'Goods Receipt' in SAP. (Control Objective 12)

21. The customer is responsible for authorizing and controlling physical access to the PC Assets Depots which provide physical access to the assets. (Control Objective 12)

22. The customer is responsible to provide a complete and accurate listing of users with physical access to the PC Assets Depots on a semi-annual basis. (Control Objective 12)

23. The customer is responsible for matching the assets received by TSDC-IT in the PC Assets Depots to the Purchase Orders and/or Purchase Releases placed with vendors. (Control Objective 12)

24. The customer is responsible to ensure that ITSM Incident Request Tickets from end users requestors to request new PC Assets are appropriate and authorized. (Control Objective 12)

25. The customer is responsible for understanding the services for which they have contracted with the TSDC-IT to perform and identifying the control objectives and activities within this report which are relative to these contracted services. (Control Objectives 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, and 12)

Section IV

Toronto Service Delivery Centre – Information Technology Outsourcing’s Control Objectives and Control Activities; and PricewaterhouseCoopers LLP’s Description of Tests of Controls and Results

IV. Toronto Service Delivery Centre – Information Technology Outsourcing's Control Objectives and Control Activities; and PricewaterhouseCoopers LLP's Description of Tests of Controls and Results

Section IV contains the tests of operating effectiveness performed by PricewaterhouseCoopers LLP on the control objectives and related activities provided by TSDC-IT. It is the customer's responsibility to evaluate this information in relation to the internal controls in place at its organization in order to assess the overall internal controls in its environment. If customer internal controls are not in place, TSDC-IT controls may not compensate for the absence of such controls. References to Capgemini include TSDC-IT.

Certain system configurations and controls as inherited from TSDC-IT's customer do not meet TSDC-IT's stated controls activities. Where such deviations are identified through the AT Section 801 / ISAE 3402 audit, TSDC-IT management seeks its customer's directions on implementing the stated control activity or obtaining a Security Exemption Form (i.e., documented acceptance of the status quo). Where customer exemptions have been obtained, existence of those exemptions is noted in the column titled 'Control Exemption'. In granting exemptions, customer is responsible for assessing the risks and potential impacts of those exemptions on its respective control environments. Where the exemptions have been identified, the related system or server was excluded from test populations with respect to the related controls or processes.

Control Description

These controls were designed and have been placed in operation by TSDC-IT and are intended to achieve the related control objectives.

Type of Control

Automated
Controls that are configured within a technology system to perform a certain function without human interaction.

Manual
Controls that are performed by or require human interaction.

Classification of Control

Preventive
Controls that do not allow an event or act to occur unless the criterion, or control, is met.

Detective
Controls that may detect errors or inappropriate information after the event or act has occurred.

Tests of Operating Effectiveness

PricewaterhouseCoopers LLP ("PwC") has performed certain tests to evaluate the operating effectiveness of the TSDC-IT policies and procedures. PwC has provided a description of tests performed related to each control objective.

Inquiry
Inquired of appropriate TSDC-IT personnel. Inquiries seeking relevant information or representation from TSDC-IT personnel were performed to obtain:

- Knowledge and additional information regarding the control; and
- Corroborating evidence of the control.

Observation
Observed the application or existence of specific controls as represented.

Inspection
Inspected documents and records indicating performance of the control. Inspection includes, among other things:

- Review of source documentation and authorizations;
- Examining documents or records for evidence of performance such as the existence of initials or signatures; and
- Inspection of TSDC-IT documentation, such as operations manuals, flow charts and job descriptions.

Results of Testing

The results of testing of operating effectiveness are provided by PwC.

Control Objectives, Control Activities, and Tests of Operating Effectiveness

Controls provide reasonable assurance that:

1. A systems development life cycle is followed for the development, acquisition and maintenance of information systems.

2. The promotion to production process for changes to systems software and hardware includes proper approval, testing and documentation prior to implementation into production.

3. The promotion to production process for changes to application software includes proper approval, testing and documentation prior to implementation into production.

4. Logical access to network components / active directory and operating systems is protected from unauthorized access or change.

5. Logical access to applications is limited to properly authorized individuals.

6. Logical access to databases is limited to properly authorized individuals.

7. Established routines and procedures exist for tracking, reporting, and notifying users and Capgemini management of processing problems.

8. System data is regularly backed-up and archived data is available for restoration in the event of processing errors and/or unexpected interruptions.

9. System capacity and availability is regularly monitored and exceptions are identified and resolved.

10. Processing is scheduled appropriately and exception processing exists to identify and resolve irregularities or errors.

11. TSDC-IT management monitors the design and operating effectiveness of the data centre physical security and environmental protection controls that have been placed in operation by infrastructure hosting service organizations, and follows up on identified errors or exceptions.

12. PC asset inventory initial receipts, storage and initial deployments are tracked completely and accurately.

Tests of Operating Effectiveness
June 1, 2015 to May 31, 2016

Control Objective 1:
Controls provide reasonable assurance that a systems development life cycle is followed for the development, acquisition and maintenance of information systems.

Description of Controls

CA #	Control Description	Type	Classification	Tests of Operating Effectiveness	Control Exemptions	Results of Testing
1.01	The System Development Life Cycle ("SDLC") and Project Management methodologies are documented, approved, and made available to project staff.	Manual	Preventive	Inquired of TSDC-IT management to verify that the SDLC and Project Management methodologies are documented, approved, and made available to project staff. Inspected the SDLC and Project Management documentation to verify that it addressed the following: ▪ Initiation; ▪ Requirements Development and Management; ▪ Estimation and Planning; ▪ Solution Development; ▪ Deployment; and ▪ Closing. Inspected the SDLC and Project Management documentation to verify that it included all of the above activities and had been appropriately approved by management. Observed the shared Intranet site, which is accessible by all project staff, to verify that the SDLC and Project Management documentation is available. Inspected a sample of projects to verify that each one followed the documented SDLC and Project Management methodologies.	None noted.	No exceptions noted.

Tests of Operating Effectiveness
June 1, 2015 to May 31, 2016

Control Objective 1:
Controls provide reasonable assurance that a systems development life cycle is followed for the development, acquisition and maintenance of information systems.

Description of Controls						
CA #	**Control Description**	**Type**	**Classification**	**Tests of Operating Effectiveness**	**Control Exemptions**	**Results of Testing**
1.02	There are processes and procedures in place to ensure projects are designed to meet the defined requirements and are appropriately documented.	Manual	Preventive	Inquired of TSDC-IT management to verify that there are processes and procedures in place to ensure projects are designed to meet the defined requirements and are appropriately documented. Inspected project documentation for a sample of projects to verify that each project included documentation that addressed the requirement for Initiation, Requirements Development and Management, Estimation and Planning, Solution Development, Deployment and Closing.	None noted.	No exceptions noted.
1.03	There are processes and procedures in place for testing which ensures that systems delivered achieve the necessary business, security, and internal control requirements.	Manual	Preventive	Inquired of TSDC-IT management to verify that there are processes and procedures related to testing to ensure systems delivered achieve the necessary business, security, and internal control requirements. Inspected project documentation for a sample of projects to verify that each project included documented test plans that were confirmed by the customer prior to commencement of testing. Inspected project documentation for a sample of projects to verify that each project included a sign-off from required internal groups involved and that User Acceptance Testing was performed and approved.	None noted.	No exceptions noted.

Tests of Operating Effectiveness
June 1, 2015 to May 31, 2016

Control Objective 1:
Controls provide reasonable assurance that a systems development life cycle is followed for the development, acquisition and maintenance of information systems.

Description of Controls						
CA #	**Control Description**	**Type**	**Classification**	**Tests of Operating Effectiveness**	**Control Exemptions**	**Results of Testing**
1.04	There are processes and procedures in place to ensure data from old systems is converted completely and accurately in accordance with customer requirements, and without unauthorized change.	Manual & Automated	Preventive	Inquired of TSDC-IT management to verify that there are processes and procedures in place to ensure data from old systems is converted completely and accurately in accordance with customer requirements without unauthorized change. Inspected project documentation for a sample of projects to verify that there are processes and procedures in place to ensure data from old systems is converted completely and accurately in accordance with customer requirements, and without unauthorized change.	None noted.	No instances of data conversion during the period; therefore, could not test operating effectiveness.
1.05	There are procedures in place to ensure that implementation to production is only made after appropriate testing and appropriate management approval.	Manual	Detective	Inquired of TSDC-IT management to verify that there are procedures in place to ensure implementation to production is only made after appropriate testing and management approval. Inspected project documentation for a sample of projects to verify that each project included details of testing and management approval prior to implementation to production.	None noted.	No exceptions noted.

Tests of Operating Effectiveness
June 1, 2015 to May 31, 2016

Control Objective 2:
Controls provide reasonable assurance that the promotion to production process for changes to systems software and hardware includes proper approval, testing and documentation prior to implementation into production.

Description of Controls						
CA #	**Control Description**	**Type**	**Classification**	**Tests of Operating Effectiveness**	**Control Exemptions**	**Results of Testing**
2.01	A formal change management process exists and is documented.	Manual	Preventive	Inquired of TSDC-IT management to verify that a formal change management process exists and is documented. Inspected the documented change management policy to verify that this policy applies to systems software and hardware changes.	None noted.	No exceptions noted.
2.02	Proposed changes are reviewed and approved by authorized personnel to assess impact on system security, stability and reliability.	Manual	Preventive	Inquired of TSDC-IT management to verify that proposed changes are reviewed and approved by appropriate personnel to assess impact on system security, stability and reliability. Inspected the documented change management policy to verify that the policy requires that changes are reviewed and approved. Inspected a sample of change tickets to verify that each was appropriately reviewed and approved by required management personnel. Inspected a sample of Change Advisory Board ("CAB") Meeting Minutes to verify that planned changes were discussed by management to assess system stability and reliability, and that there was adequate representation from the Security function at each of the CAB meetings sampled.	None noted.	No exceptions noted.

Tests of Operating Effectiveness
June 1, 2015 to May 31, 2016

Control Objective 2:
Controls provide reasonable assurance that the promotion to production process for changes to systems software and hardware includes proper approval, testing and documentation prior to implementation into production.

Description of Controls

CA #	Control Description	Type	Classification	Tests of Operating Effectiveness	Control Exemptions	Results of Testing
2.03	Changes are logged, documented and tracked through to completion.	Manual & Automated	Preventive	Inquired of TSDC-IT management to verify that all changes are logged, documented, and tracked through to completion. Inspected a sample of change tickets to verify that changes to system software and hardware are logged within the change management system, included documented details related to the change, and were tracked through to completion.	None noted.	No exceptions noted.
2.04	Test plans are developed, documented and executed for all significant changes and the test results are verified and approved prior to implementation.	Manual	Preventive	Inquired of TSDC-IT management to verify that all significant changes include test plans and that the test results are verified prior to implementation. Inspected a sample of change tickets to verify that each significant change had a test plan with documented test results, and that the test results were approved prior to implementation of the change.	None noted.	No exceptions noted.
2.05	A post-implementation review is performed by TSDC-IT management after a change is implemented into production, where required.	Manual	Detective	Inquired of TSDC-IT management to verify that a post-implementation review is performed by management after a change is implemented into production, where required. Inspected a sample of system software and hardware changes which would require a post-implementation review to verify that a post-implementation review was performed after the change was implemented into production.	None noted.	No exceptions noted.

Tests of Operating Effectiveness
June 1, 2015 to May 31, 2016

Control Objective 3:
Controls provide reasonable assurance that the promotion to production process for changes to application software includes proper approval, testing and documentation prior to implementation into production.

Description of Controls						
CA #	**Control Description**	**Type**	**Classification**	**Tests of Operating Effectiveness**	**Control Exemptions**	**Results of Testing**
3.01	A formal change management process exists and is documented.	Manual	Preventive	Inquired of TSDC-IT management to verify that a formal change management process exists and is documented. Inspected the documented change management policy to verify that this policy applies to application software.	None noted.	No exceptions noted.
3.02	Proposed changes are reviewed and approved by appropriate personnel to assess impact on system security, stability and reliability.	Manual	Preventive	Inquired of TSDC-IT management to verify that all proposed changes are reviewed and approved by appropriate personnel to assess impact on system security, stability and reliability. Inspected the documented change management policy to verify that all proposed changes must be appropriately reviewed and approved. Inspected a sample of change tickets to verify that each change was appropriately reviewed and approved by required management personnel. Inspected a sample of Change Advisory Board ("CAB") meeting minutes to verify that planned changes were discussed by management to assess system stability and reliability, and that there was adequate representation from the security function at each of the CAB meetings sampled.	None noted.	No exceptions noted.

Tests of Operating Effectiveness
June 1, 2015 to May 31, 2016

Control Objective 3:
Controls provide reasonable assurance that the promotion to production process for changes to application software includes proper approval, testing and documentation prior to implementation into production.

Description of Controls

CA #	Control Description	Type	Classification	Tests of Operating Effectiveness	Control Exemptions	Results of Testing
3.03	Changes are logged, documented and tracked through to completion.	Manual & Automated	Preventive	Inquired of TSDC-IT management to verify that all changes are logged, documented and tracked through to completion. For a sample of changes, inspected change tickets to verify that changes to applications are logged within the change management system, included documented details related to the change, and were tracked through to completion.	None noted.	No exceptions noted.
3.04	Test plans are developed, documented and executed for all significant changes, and the test results are verified and appropriately approved prior to the implementation of the application change.	Manual	Preventive	Inquired of TSDC-IT management to verify that all changes include test plans, and that test results are verified prior to implementation. For a sample of changes, inspected change tickets to verify that each change had a test plan with documented test results, and that test results were approved prior to implementation of the change.	None noted.	No exceptions noted.
3.05	Version control is in place to ensure source codes used are the correct version.	Manual & Automated	Preventive	Inquired of TSDC-IT management to verify that version control is in place to ensure source codes used are the most recent version. Inspected a sample of applications' version control tools or processes to verify that the applications have version control tools or processes in place.	None noted.	No exceptions noted.

Tests of Operating Effectiveness
June 1, 2015 to May 31, 2016

Control Objective 3:
Controls provide reasonable assurance that the promotion to production process for changes to application software includes proper approval, testing and documentation prior to implementation into production.

Description of Controls

CA #	Control Description	Type	Classification	Tests of Operating Effectiveness	Control Exemptions	Results of Testing
3.06	Development and User Acceptance Testing (“UAT”) environments are physically and/or logically segregated from the production environments.	Manual & Automated	Preventive	Inquired of TSDC-IT management to verify that UAT environments are segregated from the production environments. For a sample of applications, inspected on-screen to verify that different logical segments have been allocated to the development, UAT and production environments.	None noted.	No exceptions noted.
3.07	Programmers do not have access to modify production programs and production data. In limited and customer approved instances, programmers do have access to modify production programs, production data, or both, and in such cases, the production access is restricted to authorized users only in accordance with the terms of the associated security waiver.	Manual & Automated	Preventive	Inquired of TSDC-IT management to verify that programmers do not have access to modify production programs and production data except as approved by customers through associated security waivers. For the applications in-scope, inspected the directory-level access control lists for the production environment to verify that access is appropriately restricted and segregation of duties exists between production and development staff, and that developers do not have access to modify the production environment. In cases where developers have such access, inspected the associated security waiver approved by the customer. For a sample of development staff, inspected the access control list of applications in-scope and access privileges at the application level to verify that development staff members cannot promote changes to production.	None noted.	No exceptions noted.

Tests of Operating Effectiveness
June 1, 2015 to May 31, 2016

Control Objective 3:
Controls provide reasonable assurance that the promotion to production process for changes to application software includes proper approval, testing and documentation prior to implementation into production.

Description of Controls						
CA #	**Control Description**	**Type**	**Classification**	**Tests of Operating Effectiveness**	**Control Exemptions**	**Results of Testing**
3.08	Programmers do not have the ability to promote changes to the production environment.	Manual & Automated	Preventive	Inquired of TSDC-IT management to verify that Programmers do not have the ability to promote changes to the production environment. Inspected the user access listing to verify that only appropriate individuals have access to promote changes to the production environment.	None noted.	No exceptions noted.
3.09	A post-implementation review is performed by management after a change is implemented into production, where required.	Manual	Detective	Inquired of TSDC-IT management to verify that a post-implementation review is performed by management after a change is implemented into production, where required. Inspected a sample of changes implemented into production which would require a review to verify that a post-implementation review was performed after the change was implemented into production.	None noted.	No exceptions noted.

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June 1, 2015 to May 31, 2016

Control Objective 3:
Controls provide reasonable assurance that the promotion to production process for changes to application software includes proper approval, testing and documentation prior to implementation into production.

Description of Controls						
CA #	**Control Description**	**Type**	**Classification**	**Tests of Operating Effectiveness**	**Control Exemptions**	**Results of Testing**
3.10	For selected applications, TSDC-IT management performs a System Configuration Management ("SCM") baseline review procedure to ensure that changes to application systems are complete and authorized.	Manual	Detective	Inquired of TSDC-IT management to verify that, for selected customers and for selected applications, TSDC-IT management performs an SCM baseline review procedure to ensure changes to application systems are complete and authorized. Inspected the relevant SCM baseline review procedure as related to the particular customer and application to verify that procedures are established and in place. Confirmed that the SCM baseline review was successfully performed in the review period. Inquired of TSDC-IT management to verify that the result of the review is recorded in the repository used by the Application Management team. Inspected the results to verify that the results obtained match those stored in the repository as related to the comparison of the files in the repository or alternative source to the files in the production source. Inspected evidence of internal communication for the baseline review results to internal management (i.e., Application Management) to verify that the appropriate individual approved the review results in accordance with the procedure for the particular application under review.	None noted.	No exceptions noted.

Tests of Operating Effectiveness
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Control Objective 4:
Controls provide reasonable assurance that logical access to network components / active directory and operating systems is protected from unauthorized access or change.

Description of Controls

CA #	Control Description	Type	Classification	Tests of Operating Effectiveness	Control Exemptions	Results of Testing
4.01	Security functions are in place with the responsibility for developing, maintaining and ensuring ongoing compliance with comprehensive security standards and procedures.	Manual	Preventive	Inquired of TSDC-IT management to verify that security functions are in place with the responsibility for developing, maintaining and ensuring ongoing compliance with comprehensive security standards and procedures for network components / active directory and operating systems. Inspected the organizational charts to verify that security functions are in place with the responsibility for developing, maintaining, and ensuring ongoing compliance with comprehensive security standards and procedures for the network components / active directory and operating systems.	None noted.	No exceptions noted.

Tests of Operating Effectiveness
June 1, 2015 to May 31, 2016

Control Objective 4:
Controls provide reasonable assurance that logical access to network components / active directory and operating systems is protected from unauthorized access or change.

Description of Controls						
CA #	**Control Description**	**Type**	**Classification**	**Tests of Operating Effectiveness**	**Control Exemptions**	**Results of Testing**
4.02	There are clearly defined, endorsed, and communicated network components / active directory and operating systems security policies and standards in effect which describe resources that should be protected and demonstrate the company's commitment to their enforcement.	Manual	Preventive	Inquired of TSDC-IT management to verify that there are clearly defined, endorsed, and communicated security policies and standards in effect for network components / active directory and operating systems which describe resources that should be protected and demonstrate the company's commitment to their enforcement. Inquired of TSDC-IT management to verify that security policies and procedures for network components / active directory and operating systems are maintained on the company Intranet site, which is accessible by all TSDC-IT employees and contract employees. Inspected the security policies, standards and guidelines governing network components / active directory and operating systems security to verify these are in effect and describe resources that should be protected, and that the policies and standards are communicated to demonstrate the company's commitment to their enforcement.	None noted.	No exceptions noted.

Tests of Operating Effectiveness
June 1, 2015 to May 31, 2016

Control Objective 4:
Controls provide reasonable assurance that logical access to network components / active directory and operating systems is protected from unauthorized access or change.

Description of Controls						
CA #	**Control Description**	**Type**	**Classification**	**Tests of Operating Effectiveness**	**Control Exemptions**	**Results of Testing**
4.03	The Information Services Management Centre ("ISMC") provides a platform for ongoing escalation and support for security incidents as required.	Manual	Preventive	Inquired of TSDC-IT management to verify that the Information Services Management Centre ("ISMC") provides a platform for ongoing escalation and support for security incidents. Inspected the organizational charts to verify that members of the ISMC have assigned roles with responsibility for ongoing escalation and support for security incidents. Inspected the formally documented escalation procedures to verify that these procedures require that the ISMC has a responsibility for ongoing escalation and support for security incidents.	None noted.	No exceptions noted.
4.04	Guidelines governing user and file security are outlined in the security policy and standards documents.	Manual	Preventive	Inquired of TSDC-IT management to verify that guidelines governing network components / active directory and operating systems security are outlined in the TSDC-IT security policy and standards documents. Inquired of TSDC-IT management to verify that TSDC-IT security policies and procedures for network components / active directory and operating systems are maintained on the company Intranet site which is accessible by all TSDC-IT employees and contract employees. Inspected the security policies and standards for network components / active directory and operating systems to verify that guidelines governing network components / active directory and operating systems security are outlined in the TSDC-IT security policy and standards documents.	None noted.	No exceptions noted.

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June 1, 2015 to May 31, 2016

Control Objective 4:
Controls provide reasonable assurance that logical access to network components / active directory and operating systems is protected from unauthorized access or change.

Description of Controls						
CA #	**Control Description**	**Type**	**Classification**	**Tests of Operating Effectiveness**	**Control Exemptions**	**Results of Testing**
4.05	Requests for TSDC-IT employee access, including privileged access, to network components / active directory and operating systems are documented and appropriately approved. This approval notes that the appropriateness of access was verified.	Manual	Preventive	Inquired of TSDC-IT management to verify that requests for TSDC-IT employee access to the network components / active directory and operating system environments are documented and appropriately approved. For a sample of new hires, inspected the access request tickets to verify that TSDC-IT employee access to the network components / active directory and operating system environments are documented and appropriately approved. For a sample of new privileged access rights, inspected the access request tickets to verify that TSDC-IT employee access to the network components / active directory and operating system environments are documented and appropriately approved. For the above sample, inspected the access request tickets to verify that departmental managers determined that the access privileges granted were in line with job responsibility. For the above sample, inspected the organization chart to verify that access privileges granted were in line with job responsibilities.	None noted.	No exceptions noted.

Tests of Operating Effectiveness
June 1, 2015 to May 31, 2016

Control Objective 4:
Controls provide reasonable assurance that logical access to network components / active directory and operating systems is protected from unauthorized access or change.

Description of Controls						
CA #	**Control Description**	**Type**	**Classification**	**Tests of Operating Effectiveness**	**Control Exemptions**	**Results of Testing**
4.06	Approved requests for customer access to the environment are documented and processed completely and on a timely basis.	Manual	Preventive	Inquired of TSDC-IT management to verify that requests for customer access to the network components / active directory and operating system environments were documented and processed completely and on a timely basis. For a sample of access request tickets, inspected the access request tickets, including time and date of ticket, and the email from TSDC-IT to the customer to verify that the request was processed on a timely basis.	None noted.	No exceptions noted.
4.07	User authentication is achieved through the use of an appropriate combination of password controls.	Manual & Automated	Preventive	Inquired of TSDC-IT management to verify that user authentication is achieved through the use of an appropriate combination of password controls. Inspected a sample of the network components / active directory and operating system parameters to verify that user authentication is achieved through the use of an appropriate combination of the following password controls: i. Minimum password length of 5 characters; ii. Frequency of forced password changes is 90 days; and iii. Number of passwords that must be used prior to recycling a password is at least 3.	None noted.	No exceptions noted.

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June 1, 2015 to May 31, 2016

Control Objective 4:
Controls provide reasonable assurance that logical access to network components / active directory and operating systems is protected from unauthorized access or change.

Description of Controls						
CA #	**Control Description**	**Type**	**Classification**	**Tests of Operating Effectiveness**	**Control Exemptions**	**Results of Testing**
4.08	Departmental Managers are responsible for notifying the Service Desk regarding TSDC-IT staff terminations, which implements the removal of access privileges. Changes are processed according to agreed timelines.	Manual	Preventive	Inquired of TSDC-IT management to verify that Departmental Managers are responsible for notifying the Service Desk regarding staff terminations, which then implements the removal of access privileges. For a sample of staff terminations, inspected staff termination tickets (i.e. including privileged access) to verify that Departmental Managers notified the Service Desk regarding staff terminations and the Service Desk implemented the necessary access privilege changes. For the above sample, inspected the access privileges on-line to verify that the Service Desk implemented the removal of access privileges according to agreed timelines.	None noted.	No exceptions noted.
4.09	Procedures exist to identify inactive Windows/LAN accounts and disable such accounts when and as authorized by the customer.	Manual & Automated	Detective	Inquired of TSDC-IT management to verify that procedures exist to identify inactive Windows/LAN accounts and disable such accounts when and as authorized by the customer. For a sample of EARS tickets generated for removal of inactive accounts, inspected the EARS tickets to verify that appropriate approvals were obtained to disable the accounts identified. For a sample of accounts, inspected the quarterly review process for inactive Windows/LAN accounts to verify that accounts were identified for removal and that appropriate approvals were obtained to disable the accounts identified. Also, inspected the on-line screen to verify that the accounts had been disabled.	None noted.	No exceptions noted.

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Control Objective 4:
Controls provide reasonable assurance that logical access to network components / active directory and operating systems is protected from unauthorized access or change.

Description of Controls						
CA #	**Control Description**	**Type**	**Classification**	**Tests of Operating Effectiveness**	**Control Exemptions**	**Results of Testing**
4.10	Security logging features are activated at the network components / active directory and operating systems level to record system security events.	Manual & Automated	Detective	Inquired of TSDC-IT management to verify that security logging features are activated at the network / active directory and operating system level to record system security events. For a sample of network / active directory and operating systems, inspected the network / active directory and operating system parameters to verify that security logging features are activated to record system security events. For the Windows operating system, inspected the network / active directory and operating system parameters to verify that the security logging features are activated as follows: **Event** — **Criteria** Logon & Logoff — Failure File & Object Access — Failure Use of User Rights — Failure User & Group Mgt — Success / Failure Policy Changes — Success / Failure Restart, Shutdown — Failure	None noted.	No exceptions noted.
4.11	The administrator accounts are restricted for use in appropriate situations to a limited number of appropriate TSDC-IT personnel.	Manual & Automated	Preventive	Inquired of TSDC-IT management to verify that administrator accounts are restricted for use in appropriate situations to a limited number of appropriate TSDC-IT personnel. For a sample of network components / active directory and operating systems, inspected the system generated list of administrator accounts and inquired with management to verify that administrator accounts are restricted for use in appropriate situations to a limited number of appropriate TSDC-IT personnel.	None noted.	No exceptions noted.

Tests of Operating Effectiveness
June 1, 2015 to May 31, 2016

Control Objective 4:
Controls provide reasonable assurance that logical access to network components / active directory and operating systems is protected from unauthorized access or change.

Description of Controls						
CA #	**Control Description**	**Type**	**Classification**	**Tests of Operating Effectiveness**	**Control Exemptions**	**Results of Testing**
4.12	Only a restricted number of administrator accounts are used on each network components / active directory and operating system in order to carry out system administration tasks.	Manual & Automated	Preventive	Inquired of TSDC-IT management to verify that only a restricted number of administrator accounts are used on each network components / active directory and operating system in order to carry out system administration tasks. For a sample of network component / active directory and operating systems, inspected the administrator accounts and supporting documentation, and inquired of TSDC-IT management, to verify that only a restricted number of administrator accounts are used on each network components / active directory and operating system in order to carry out system administration tasks.	None noted.	No exceptions noted.
4.13	Privileged accounts (i.e., system, service or administrative accounts) are restricted for use in appropriate situations to a restricted number of appropriate TSDC-IT personnel.	Manual & Automated	Preventive	Inquired of TSDC-IT management to verify that privileged accounts (i.e., system, service or administrative accounts) are restricted for use in appropriate situations to a restricted number of appropriate TSDC-IT personnel. For a sample of network components / active directory and operating systems, inspected the privileged accounts (i.e., system, service or administrative accounts) and supporting documentation, and inquired of TSDC-IT management, to verify that generic accounts with privileged access are restricted for use in appropriate situations to a restricted number of appropriate TSDC-IT personnel.	None noted.	No exceptions noted.

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June 1, 2015 to May 31, 2016

Control Objective 4:
Controls provide reasonable assurance that logical access to network components / active directory and operating systems is protected from unauthorized access or change.

Description of Controls						
CA #	**Control Description**	**Type**	**Classification**	**Tests of Operating Effectiveness**	**Control Exemptions**	**Results of Testing**
4.14	The network components / active directory and operating systems are configured to ensure that the access permissions granted to directories containing network system files are in accordance with TSDC-IT standards.	Manual & Automated	Preventive	Inquired of TSDC-IT management to verify that the network components / active directory and operating systems are configured to ensure that the access permissions granted to directories containing network system files are in accordance with TSDC-IT Standards, as documented in the Information Security Policy. For a sample of network components / active directory and operating systems, inspected the system parameters to verify that network operating system is configured to ensure that the access permissions granted to directories containing network system files are in accordance with TSDC-IT standards.	*Customer Exemptions noted.*	No exceptions noted.
4.15	Quarterly reviews of current TSDC employee user accounts (i.e., with greater than 'read only' access) are performed by the appropriate functional manager or delegate to ensure access rights are commensurate with job responsibilities.	Manual & Automated	Detective	Inquired of TSDC-IT management to verify that quarterly reviews of current TSDC-IT employee user accounts (i.e., with greater than 'read only' access) are performed by the appropriate functional manager or delegate to ensure access rights are commensurate with job responsibilities. Inspected a sample of quarterly reviews of current TSDC-IT user account access to verify that reviews of access rights of current TSDC-IT user accounts are performed by the appropriate functional manager.	None noted.	No exceptions noted.

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Control Objective 4:
Controls provide reasonable assurance that logical access to network components / active directory and operating systems is protected from unauthorized access or change.

Description of Controls						
CA #	**Control Description**	**Type**	**Classification**	**Tests of Operating Effectiveness**	**Control Exemptions**	**Results of Testing**
4.16	Appropriate anti-virus software is installed on the infrastructure, and downloads of recent virus definitions from the anti-virus vendor website are performed as required.	Manual & Automated	Preventive	Inquired of TSDC-IT management to verify that appropriate anti-virus software is installed on the infrastructure, and that downloads of recent virus definitions from the anti-virus vendor website is performed as required. Inspected a sample of domain controllers to verify that appropriate anti-virus software is installed on the infrastructure.	None noted.	No exceptions noted.

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Control Objective 5:
Controls provide reasonable assurance that logical access to applications is limited to properly authorized individuals.

Description of Controls						
CA #	**Control Description**	**Type**	**Classification**	**Tests of Operating Effectiveness**	**Control Exemptions**	**Results of Testing**
5.01	Security functions are in place with the responsibility for developing, maintaining, and ensuring ongoing compliance with comprehensive security standards and procedures.	Manual	Preventive	Inquired of TSDC-IT management to verify that security functions are in place with the responsibility for developing, maintaining, and ensuring ongoing compliance with comprehensive security standards and procedures for application software. Inspected the organizational charts to verify that security functions are in place.	None noted.	No exceptions noted.
5.02	There are clearly defined, endorsed, and communicated security policies and standards in effect which describe resources that should be protected and demonstrate the company's commitment to their enforcement.	Manual	Preventive	Inquired of TSDC-IT management to verify that there are clearly defined, endorsed, and communicated security policies and standards in effect for application software which describe resources that should be protected and demonstrate the company's commitment to their enforcement. Inquired of TSDC-IT management to verify that security policies and procedures for application software are maintained on the company Intranet site which is accessible by all TSDC-IT employees and contract employees. Inspected the security policies and standards for application software to verify that these are in effect and describe resources that should be protected, and communicated to demonstrate the company's commitment to their enforcement.	None noted.	No exceptions noted.

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Control Objective 5:
Controls provide reasonable assurance that logical access to applications is limited to properly authorized individuals.

Description of Controls						
CA #	**Control Description**	**Type**	**Classification**	**Tests of Operating Effectiveness**	**Control Exemptions**	**Results of Testing**
5.03	The Information Services Management Centre (“ISMC”) provides a platform for ongoing escalation and support for security incidents as required.	Manual	Preventive	Inquired of TSDC-IT management to verify that the ISMC provides a platform for ongoing escalation and support for security incidents. Inspected the organizational charts to verify that members of the ISMC have assigned roles with responsibility for ongoing escalation and support for security incidents. Inspected the formally documented escalation procedures to verify that these procedures require that the ISMC has a responsibility for ongoing escalation and support for security incidents.	None noted.	No exceptions noted.
5.04	Guidelines governing user and file security are outlined in the security policy and standards documents.	Manual	Preventive	Inquired of TSDC-IT management to verify that guidelines governing application software and file security are outlined in the TSDC-IT security policy and standards documents. Inquired of TSDC-IT management to verify that TSDC-IT security policies and procedures for application software are maintained on the company Intranet site, which is accessible by all TSDC-IT employees and contract employees. Inspected the security policies and standards for application software to verify that guidelines governing application software security are outlined in the TSDC-IT security policy and standards documents.	None noted.	No exceptions noted.

Tests of Operating Effectiveness
June 1, 2015 to May 31, 2016

Control Objective 5:
Controls provide reasonable assurance that logical access to applications is limited to properly authorized individuals.

Description of Controls						
CA #	**Control Description**	**Type**	**Classification**	**Tests of Operating Effectiveness**	**Control Exemptions**	**Results of Testing**
5.05	All requests for TSDC-IT employee access to the application software environment are documented and appropriately approved. This approval notes the appropriateness of access was verified.	Manual	Preventive	Inquired of TSDC-IT management to verify that all requests for TSDC-IT employee access to the application software environment are documented and appropriately approved. For a sample of new hires, inspected the access request tickets to verify that TSDC-IT employee access to the application environments are documented and appropriately approved. For a sample of new privileged access rights, inspected the access requests to verify that TSDC-IT employees' access to the application is documented and appropriately approved. For the above sample of new hires, inspected the organization chart to verify that access privileges granted were in line with job responsibilities. For a sample of privileged users, inquired of the user's supervisor to verify that the access privileges granted were in line with job responsibilities.	None noted.	No exceptions noted.
5.06	All approved requests for customer access to the environment are documented and processed completely and on a timely basis.	Manual	Preventive	Inquired of TSDC-IT management to verify that all approved requests for customer access to the application software environment are documented and processed completely and on a timely basis. For a sample of access request tickets, inspected the user access request tickets (i.e., including time and date of ticket) and the email from TSDC-IT to the customer to verify that the request was processed on a timely basis.	None noted.	No exceptions noted.

Tests of Operating Effectiveness
June 1, 2015 to May 31, 2016

Control Objective 5:
Controls provide reasonable assurance that logical access to applications is limited to properly authorized individuals.

Description of Controls						
CA #	**Control Description**	**Type**	**Classification**	**Tests of Operating Effectiveness**	**Control Exemptions**	**Results of Testing**
5.07	User authentication is achieved through the use of an appropriate combination of password controls.	Manual & Automated	Preventive	Inquired of TSDC-IT management to verify that user authentication is achieved through the use of an appropriate combination of password controls. Inspected a sample of the application software parameters to verify that user authentication is achieved through the use of an appropriate combination of the following password controls: i. Minimum password length of 5 characters; ii. Frequency of forced password changes is 90 days; and iii. Number of passwords that must be used prior to recycling a password is at least 3.	None noted.	No exceptions noted.
5.08	Departmental Managers are responsible for notifying the Service Desk regarding TSDC-IT staff terminations, which implements the removal of access privileges. All changes are processed according to mutually agreed timelines.	Manual	Preventive	Inquired of TSDC-IT management to verify that Departmental Managers are responsible for notifying the Service Desk, which implements the removal of access privileges, regarding staff terminations. For a sample of staff terminations (i.e., including privileged access), inspected staff termination tickets to verify that Departmental Managers notified the Service Desk regarding staff terminations and that the Service Desk implemented access privilege changes. For the same sample, inspected the access privileges online to verify that the Service Desk implemented the removal of access privileges.	None noted.	No exceptions noted

Tests of Operating Effectiveness
June 1, 2015 to May 31, 2016

Control Objective 5:
Controls provide reasonable assurance that logical access to applications is limited to properly authorized individuals.

Description of Controls						
CA #	**Control Description**	**Type**	**Classification**	**Tests of Operating Effectiveness**	**Control Exemptions**	**Results of Testing**
5.09	Security logging features are activated at the application level to record system security events.	Manual & Automated	Detective	Inquired of TSDC-IT management to verify that security logging features are activated at the application software level to record security events. Inspected a sample of the application software parameters to verify that parameters for security logging have been activated to record system security events.	None noted.	No exceptions noted.
5.10	Accounts used to administer the applications are restricted to a limited number of appropriate TSDC-IT personnel.	Manual & Automated	Preventive	Inquired of TSDC-IT management to verify that administrator accounts are restricted to a limited number of appropriate TSDC-IT personnel. Inspected a sample of the accounts used to administrator application systems, supporting documentation and inquired of TSDC-IT management to verify that administrator accounts are restricted to a limited number of appropriate TSDC-IT personnel.	None noted.	No exceptions noted.
5.11	Privileged accounts (i.e., system, service or administrative accounts) are restricted for use in appropriate situations to a restricted number of appropriate TSDC-IT personnel.	Manual & Automated	Preventive	Inquired of TSDC-IT management to verify that privileged accounts (i.e., system, service or administrative accounts) are restricted for use in appropriate situations to a restricted number of appropriate TSDC-IT personnel. Inspected a sample of the privileged accounts (i.e., system, service or administrative accounts) on the application systems, and the supporting documentation, and inquired of TSDC-IT management to verify that privileged accounts (i.e., system, service or administrative accounts) are restricted for use in appropriate situations to a restricted number of appropriate TSDC-IT personnel.	None noted.	No exceptions noted.

Tests of Operating Effectiveness
June 1, 2015 to May 31, 2016

Control Objective 5:
Controls provide reasonable assurance that logical access to applications is limited to properly authorized individuals.

Description of Controls						
CA #	**Control Description**	**Type**	**Classification**	**Tests of Operating Effectiveness**	**Control Exemptions**	**Results of Testing**
5.12	An annual review of current TSDC employee user accounts (i.e., with greater than ‘read only’ access) is performed by the appropriate functional manager or delegate to ensure that current user-IDs are valid.	Manual & Automated	Detective	Inquired of TSDC-IT management to verify that an annual review of current TSDC-IT employee user accounts (i.e., with greater than ‘read only’ access) is performed by the appropriate functional manager or delegate to ensure that current user-IDs are valid. Inspected a sample of annual reviews to verify that reviews of current TSDC-IT user accounts are performed by the appropriate functional manager to ensure that current user-IDs are valid.	None noted.	No exceptions noted.

Tests of Operating Effectiveness
June 1, 2015 to May 31, 2016

Control Objective 6:
Controls provide reasonable assurance that logical access to databases is limited to properly authorized individuals.

Description of Controls						
CA #	**Control Description**	**Type**	**Classification**	**Tests of Operating Effectiveness**	**Control Exemptions**	**Results of Testing**
6.01	Data changes made by database administrators ("DBAs") are requested and authorized through Service Request tickets from the customer which follow the centralized Change Management Process and Procedure.	Manual	Preventive	Inquired of TSDC-IT management to verify that data changes made by DBAs are requested and authorized through Service Request tickets from the customer. Inspected the TSDC Change Management Process and Procedure document to verify that data changes follow the centralized Change Management Process and Procedure.	None noted.	No exceptions noted.
6.02	All data change requests are approved by the customer prior to making the change.	Manual & Automated	Preventive	Inquired of TSDC-IT management to verify that Service Request tickets are approved by the customer before the change is made. For a sample of Service Request tickets, inspected the tickets and the underlying documents and authorization to verify that data change requests are approved by the customer before the change is made. For a sample of data changes, inspected the corresponding Service Request tickets, and the underlying documents and authorization, to verify that data changes are approved by the customer before the change is made.	None noted.	No exceptions noted.

Tests of Operating Effectiveness
June 1, 2015 to May 31, 2016

Control Objective 6:
Controls provide reasonable assurance that logical access to databases is limited to properly authorized individuals.

Description of Controls						
CA #	**Control Description**	**Type**	**Classification**	**Tests of Operating Effectiveness**	**Control Exemptions**	**Results of Testing**
6.03	Database administrator authentication is achieved through the use of an appropriate combination of password controls. In limited and customer approved instances, some password controls are not enforced on certain privileged accounts, and in such cases, the account access is restricted to authorized users only.	Manual & Automated	Preventive	Inquired of TSDC-IT management to verify that database administrator authentication is achieved through the use of an appropriate combination of password controls. Inspected the database software parameters for a sample of databases to verify that database administrator authentication is achieved through the use of an appropriate combination the following password controls as defined per Customer or TSDC-IT Database Security Standards: i. Minimum password length; ii. Frequency of forced password changes; and iii. Number of passwords that must be used prior to recycling a password.	*Customer Exemptions noted.*	No exceptions noted.
6.04	Database administrator account passwords are maintained in a secure area.	Manual & Automated	Preventive	Inquired of TSDC-IT management to verify that database administrator account passwords are maintained in a secure area where only database administrators have access. Inspected database software parameters and access controls for a sample of databases to verify that database administrator account passwords are maintained in a secure area online where only database administrators have access.	None noted.	No exceptions noted.

Tests of Operating Effectiveness
June 1, 2015 to May 31, 2016

Control Objective 6:
Controls provide reasonable assurance that logical access to databases is limited to properly authorized individuals.

Description of Controls						
CA #	**Control Description**	**Type**	**Classification**	**Tests of Operating Effectiveness**	**Control Exemptions**	**Results of Testing**
6.05	Requests for TSDC-IT employee access, including privileged access, to databases are documented and appropriately approved by the requestor's functional manager. This approval notes that the appropriateness of access was verified.	Manual	Preventive	Inquired of TSDC-IT management to verify that new TSDC-IT employee user access requests for databases, including privileged access, require the approval of the requestor's functional manager. For a sample of new TSDC-IT employee user access request tickets and privileged user access request tickets, inspected the tickets and the approval of access to verify that new TSDC-IT employee user access requests and privileged user access requests for databases require the approval of the requestor's functional manager. For a sample of privileged users, inquired of the privileged user's supervisor to verify that access privileges granted was in line with job responsibility.	None noted.	No exceptions noted.

Tests of Operating Effectiveness
June 1, 2015 to May 31, 2016

Control Objective 6:
Controls provide reasonable assurance that logical access to databases is limited to properly authorized individuals.

Description of Controls						
CA #	**Control Description**	**Type**	**Classification**	**Tests of Operating Effectiveness**	**Control Exemptions**	**Results of Testing**
6.06	Database Administrator ("DBA") account passwords are changed immediately by the primary DBA for that database environment when a DBA transitions out of the DBA group or leaves the TSDC-IT.	Manual	Preventive	Inquired of TSDC-IT management to verify that DBA passwords are changed immediately by the primary DBA when a DBA transitions out of the DBA group or leaves the TSDC-IT. For DBA terminations and transfers inspected the database password parameters to verify that DBA account passwords are changed immediately by the primary DBA for that database environment when a DBA transitions out of the DBA group or leaves the TSDC-IT.	None noted.	No exceptions noted.
6.07	Accounts used to administer the database applications are restricted for use in appropriate situations to a restricted number of appropriate TSDC-IT personnel.	Manual & Automated	Preventive	Inquired of TSDC-IT management to verify that accounts used to administer database applications are restricted for use in appropriate situations to a restricted number of appropriate TSDC-IT personnel. Inspected the accounts used to administer database application systems and the supporting documentation, and inquired of TSDC-IT management to verify that accounts used to administer database applications are restricted for use in appropriate situations to a restricted number of appropriate TSDC-IT personnel.	None noted.	No exceptions noted.

Tests of Operating Effectiveness
June 1, 2015 to May 31, 2016

Control Objective 6:
Controls provide reasonable assurance that logical access to databases is limited to properly authorized individuals.

Description of Controls						
CA #	**Control Description**	**Type**	**Classification**	**Tests of Operating Effectiveness**	**Control Exemptions**	**Results of Testing**
6.08	Privileged accounts (i.e., system, service or administrative accounts) are restricted for use in appropriate situations to a restricted number of appropriate TSDC-IT personnel.	Manual & Automated	Preventive	Inquired of TSDC-IT management to verify that privileged accounts (i.e., system, service or administrative accounts) are restricted for use in appropriate situations to a restricted number of appropriate TSDC-IT personnel. Inspected the privileged accounts (i.e., system, service or administrative accounts) to verify that privileged accounts (system, service or administrative accounts), supporting documentation and inquired of TSDC-IT management are restricted for use in appropriate situations to a restricted number of appropriate TSDC-IT personnel.	None noted.	No exceptions noted.
6.09	Quarterly reviews of current TSDC-IT employee user accounts (i.e., with greater than ‘read only’ access) are performed by the appropriate functional manager or delegate to ensure access rights are commensurate with job responsibilities.	Manual & Automated	Detective	Inquired of TSDC management to verify that quarterly reviews of current TSDC employee user accounts (i.e., with greater than ‘read only’ access) are performed by the appropriate functional manager or delegate to ensure access rights are commensurate with job responsibilities. Inspected a sample of quarterly reviews of current TSDC-IT user account access to databases to verify that reviews of current TSDC-IT user accounts are performed by the appropriate functional manager.	None noted.	No exceptions noted.

Tests of Operating Effectiveness
June 1, 2015 to May 31, 2016

Control Objective 7:
Controls provide reasonable assurance that established routines and procedures exist for tracking, reporting, and notifying users and Capgemini management of processing problems.

Description of Controls

CA #	Control Description	Type	Classification	Tests of Operating Effectiveness	Control Exemptions	Results of Testing
7.01	A formal and documented incident management process is used.	Manual	Preventive	Inquired of TSDC-IT management to verify that a formal and documented incident management process is used. Inspected the following documents to verify that a formal and documented incident management process is used: ▪ Minor Incident Procedure; ▪ Priority Code Definitions; ▪ Root Cause Analysis Procedures; and ▪ P1/P2 Text Messaging Procedures. Observed the Lotus Notes database and the Intranet site to verify that the above incident management documentation is available to all TSDC-IT operations staff members.	None noted.	No exceptions noted.
7.02	Meetings are held weekly to review and analyze operational incidents and their resolution. All open incidents are regularly reviewed.	Manual	Preventive	Inquired of TSDC-IT management to verify that meetings are held on a weekly basis to review and analyze operational incidents and that these meetings address all open incidents, as well as resolutions. Inspected a sample of meeting minutes and reports of the management review of open problem tickets to verify that reviews of open problems and resolutions are performed on a weekly basis, and are reviewed by appropriate level of management.	None noted.	No exceptions noted.

Tests of Operating Effectiveness
June 1, 2015 to May 31, 2016

Control Objective 7:
Controls provide reasonable assurance that established routines and procedures exist for tracking, reporting, and notifying users and Capgemini management of processing problems.

Description of Controls

CA #	Control Description	Type	Classification	Tests of Operating Effectiveness	Control Exemptions	Results of Testing
7.03	Monitoring tools are used to check the networks for potential outages on an ongoing basis. In the event of outages, the on-call technology support staff is paged.	Manual & Automated	Preventive	Inquired of TSDC-IT management to verify tha monitoring tools are used to check the networks for potential outages on an ongoing basis, and that a process is in place to page on-call technology support staff in the event of an outage. Observed on-line to verify that the monitoring tools are used to check the networks for potential outages on an ongoing basis. Inspected the network monitoring tools parameter settings to verify that parameters have been set up on the tools to check the networks for potential outages on an ongoing basis, and in case of outages, the on-call technology support staff is paged. For a sample of network outages, inspected the supporting documentation to verify that on-call technology support staff was paged.	None noted.	No exceptions noted.
7.04	A problem management database exists to track identified problems. Problems are risk-ranked, categorized, escalated and resolved according to a pre-defined criterion.	Manual & Automated	Preventive	Inquired of TSDC-IT management to verify that a problem management database exists that tracks identified problems. Inquired to verify that the problem tickets include a risk-ranking, categorization, escalation and resolution as per pre-defined documented criterion. Inspected a sample of problem tickets to verify that problem management tickets were properly documented and resolved.	None noted.	No exceptions noted.

Tests of Operating Effectiveness
June 1, 2015 to May 31, 2016

Control Objective 7:
Controls provide reasonable assurance that established routines and procedures exist for tracking, reporting, and notifying users and Capgemini management of processing problems.

Description of Controls						
CA #	**Control Description**	**Type**	**Classification**	**Tests of Operating Effectiveness**	**Control Exemptions**	**Results of Testing**
7.05	Procedures have been established to accommodate emergency changes to system software, hardware and applications, and these procedures parallel the standard change control procedures.	Manual	Preventive	Inquired of TSDC-IT management to verify that procedures have been established to accommodate emergency problems to system software, hardware and applications, and that these procedures parallel the standard change control procedures. Inspected a sample of incident tickets to verify that appropriate problem management and change management procedures were followed which included proper documentation of the issue, and where necessary, completion of a Root Cause Analysis document.	None noted.	No exceptions noted.
7.06	Incident logs are reviewed and trends analyzed to identify potential impact to client systems.	Manual	Detective	Inquired of TSDC-IT management to verify that incident tickets are reviewed and trends analyzed to identify the potential impact to client systems. Inspected a sample of Root Cause Analysis reports and Incident reports to verify that incidents are reviewed and trends analyzed to determine potential impacts on client system.	None noted.	No exceptions noted.
7.07	A procedure manual pertaining to computer operations has been developed and is available to the staff. Procedures and reference manuals are current and include, at a minimum, problem resolution and escalation procedures, contact names, and recovery procedures.	Manual	Preventive	Inquired of TSDC-IT management to verify that a computer operations procedure manual has been developed and is available to the staff via the Intranet. Inspected the procedure manual to verify that it included problem resolution and escalation procedures, contact names, and recovery procedures.	None noted.	No exceptions noted.

Tests of Operating Effectiveness
June 1, 2015 to May 31, 2016

Control Objective 7:
Controls provide reasonable assurance that established routines and procedures exist for tracking, reporting, and notifying users and Capgemini management of processing problems.

Description of Controls						
CA #	**Control Description**	**Type**	**Classification**	**Tests of Operating Effectiveness**	**Control Exemptions**	**Results of Testing**
7.08	There are documented Service Level Management ("SLM") procedures that are used to address system hardware and software problems.	Manual	Preventive	Inquired of TSDC-IT management to verify that there are documented SLM procedures that are used to address system hardware and software problems. Inspected the documented SLM procedures to verify that they include established procedures to address system hardware and software problems.	None noted.	No exceptions noted.

Tests of Operating Effectiveness
June 1, 2015 to May 31, 2016

Control Objective 8:
Controls provide reasonable assurance that system data is regularly backed-up and archived data is available for restoration in the event of processing errors and/or unexpected interruptions.

Description of Controls

CA #	Control Description	Type	Classification	Tests of Operating Effectiveness	Control Exemptions	Results of Testing
8.01	Back-up copies of critical data and program files are taken daily, weekly, monthly and yearly, as required.	Manual & Automated	Preventive	Inquired of TSDC-IT management to verify that back-up copies of critical data and program files are taken daily, weekly, monthly and yearly, in accordance with customer contractual agreements. Inspected a sample of listing of in-scope system servers and the corresponding back-up schedules to verify that back-up copies of critical data and program files are taken daily, weekly, monthly and yearly. Inspected a sample back-up log of jobs run (i.e., including daily, weekly, monthly) using the online back-up tool to verify that back-up jobs were completed successfully. For those jobs not completed successfully, inquired of TSDC-IT management to verify that the issue was resolved and the back-up job was subsequently successful.	None noted.	No exceptions noted.

Tests of Operating Effectiveness
June 1, 2015 to May 31, 2016

Control Objective 8:
Controls provide reasonable assurance that system data is regularly backed-up and archived data is available for restoration in the event of processing errors and/or unexpected interruptions.

Description of Controls						
CA #	**Control Description**	**Type**	**Classification**	**Tests of Operating Effectiveness**	**Control Exemptions**	**Results of Testing**
8.02	Procedures are in place to ensure recovery of files can be achieved in an accurate, complete and timely basis.	Manual	Preventive	Inquired of TSDC-IT management to verify that there is a process in place to ensure that recovery of files can be achieved in an accurate, complete and timely basis. Inspected the most recent recovery procedures in place to verify that, as per the documented recovery procedures, there is a process in place to ensure recovery of files can be achieved in an accurate, complete and timely basis. Inspected a sample of results of file restore tests performed by TSDC-IT to verify that the restores were performed successfully and in a complete and timely manner.	None noted.	No exceptions noted.
8.03	Back-up storage media is transported to a physically and environmentally controlled off-site storage facility in a way that maintains the integrity and confidentiality of information.	Manual & Automated	Preventive	Inquired of TSDC-IT management to verify that procedures are in place to ensure that back-up storage media is transported to a physically and environmentally controlled off-site storage facility in a way that maintains the integrity and confidentiality of information. Inspected the contract in place with the third party responsible for transporting the back-up tapes to verify that the contract includes provisions for physically and environmentally protecting the tapes during transit between facilities.	None noted.	No exceptions noted.

Tests of Operating Effectiveness
June 1, 2015 to May 31, 2016

Control Objective 8:
Controls provide reasonable assurance that system data is regularly backed-up and archived data is available for restoration in the event of processing errors and/or unexpected interruptions.

Description of Controls						
CA #	**Control Description**	**Type**	**Classification**	**Tests of Operating Effectiveness**	**Control Exemptions**	**Results of Testing**
8.04	Procedures exist to control the physical storage, movement, labeling and back-up of tapes, as authorized by management.	Manual & Automated	Preventive	Inquired of TSDC-IT management to verify that procedures are in place to ensure the storage, movement, labeling and back-up of tapes is performed by individuals authorized by management. Inspected a sample of individuals who perform the storage, movement, labeling and back-up of tapes to verify that the employees were appropriately authorized by management. Inspect a sample of backup tape movements to verify that backup tape movements are requested by authorized TSDC personnel.	None noted.	No exceptions noted.

Tests of Operating Effectiveness
June 1, 2015 to May 31, 2016

Control Objective 9:
Controls provide reasonable assurance that system capacity and availability is regularly monitored and exceptions are identified and resolved.

Description of Controls

CA #	Control Description	Type	Classification	Tests of Operating Effectiveness	Control Exemptions	Results of Testing
9.01	Responsibility for capacity planning is assigned and procedures exist to assess and address capacity requirements.	Manual	Preventive	Inquired of TSDC-IT management to verify that responsibility for capacity planning is assigned and procedures exist to assess and address capacity requirements. Inspected the documented monthly capacity reports to verify that procedures exist to assess and address capacity requirements. Inspected the relevant job descriptions to verify that responsibility for capacity planning is assigned.	None noted.	No exceptions noted.

Tests of Operating Effectiveness
June 1, 2015 to May 31, 2016

Control Objective 9:
Controls provide reasonable assurance that system capacity and availability is regularly monitored and exceptions are identified and resolved.

Description of Controls						
CA #	**Control Description**	**Type**	**Classification**	**Tests of Operating Effectiveness**	**Control Exemptions**	**Results of Testing**
9.02	Problems related to system capacity and availability are reviewed, monitored, and documented, and resolutions are retained. Meetings are held weekly to review and analyze operational problems and their resolution.	Manual	Detective	Inquired of TSDC-IT management to verify that documented procedures require that problems related to system capacity and availability are reviewed, monitored, and documented, and that resolutions are retained and meetings are held weekly to review and analyze operational problems and their resolution. Inspected the documented capacity planning procedures to verify that problems related to system capacity and availability are reviewed, monitored, and documented, and resolutions are retained and meetings are held weekly to review and analyze operational problems and their resolution. For a sample of problems related to system capacity and availability, inspected the supporting documents to verify that problems related to system capacity and availability are reviewed, monitored, and documented, and resolutions are retained. For a sample of minutes of weekly meetings, inspected these minutes to verify that problems related to system capacity and availability were documented, and inspected the supporting documents to verify that meetings are held weekly to review and analyze operational problems and their resolution.	None noted.	No exceptions noted.

Tests of Operating Effectiveness
June 1, 2015 to May 31, 2016

Control Objective 9:
Controls provide reasonable assurance that system capacity and availability is regularly monitored and exceptions are identified and resolved.

Description of Controls						
CA #	**Control Description**	**Type**	**Classification**	**Tests of Operating Effectiveness**	**Control Exemptions**	**Results of Testing**
9.03	Monitoring tools are used to check the networks for potential outages on an ongoing basis. In case of outages, the on-call technology support staff is paged.	Manual & Automated	Detective	Inquired of TSDC-IT management to verify that monitoring tools are used to check the networks for potential outages on an ongoing basis and, in case of outages, the on-call technology support staff is paged. Observed online to verify that monitoring tools are used to check the networks for potential outages on an ongoing basis. Inspected the network monitoring tools parameter settings to verify that parameters have been set up on the tools to check the networks for potential outages on an ongoing basis and, in case of outages, the on-call technology support staff is paged. For a sample of network outages, inspected the supporting documentation to verify on-call technology support staff was paged.	None noted.	No exceptions noted.
9.04	Management reviews periodic reports on the status of operational quality and availability of the system.	Manual	Detective	Inquired of TSDC-IT management to verify that management reviews periodic Status Reports which report on the operational quality and availability of the system. For a sample of Status Reports, inspected these reports and the supporting documentation to verify that management reviews periodic Status Reports which report on the operational quality and availability of the system.	None noted.	No exceptions noted.

Tests of Operating Effectiveness
June 1, 2015 to May 31, 2016

Control Objective 10:
Controls provide reasonable assurance that processing is scheduled appropriately and exception processing exists to identify and resolve irregularities or errors.

Description of Controls						
CA #	**Control Description**	**Type**	**Classification**	**Tests of Operating Effectiveness**	**Control Exemptions**	**Results of Testing**
10.01	TSDC-IT has specific batch processing work instructions that include: ▪ Batch run procedures that cover daily, weekly, monthly, timeframes; ▪ Planning and scheduling of all batch processing; and ▪ Relevant documentation that supports the batch processing.	Manual	Preventive	Inquired of TSDC-IT management to verify that TSDC-IT has specific batch processing work instructions that include: ▪ Batch run procedures that cover daily, weekly, monthly, timeframes; ▪ Planning and scheduling of all batch processing; and ▪ Relevant documentation that supports the batch processing. Inspected the documented batch processing work instructions at TSDC-IT to verify that the centre has specific batch processing work instructions that include: ▪ Batch run procedures that cover daily, weekly, monthly, timeframes; ▪ Planning and scheduling of all batch processing; and ▪ Relevant documentation that supports the batch processing. For a sample of daily, weekly, and monthly batch jobs, observed the jobs to verify that the documented batch processing work instructions were followed and reviewed by management.	None noted.	No exceptions noted.

Tests of Operating Effectiveness
June 1, 2015 to May 31, 2016

Control Objective 10:
Controls provide reasonable assurance that processing is scheduled appropriately and exception processing exists to identify and resolve irregularities or errors.

Description of Controls						
CA #	**Control Description**	**Type**	**Classification**	**Tests of Operating Effectiveness**	**Control Exemptions**	**Results of Testing**
10.02	Access to the job scheduling tool is restricted to appropriate individuals.	Manual & Automated	Preventive	Inquired of TSDC-IT management to verify that access to the job scheduling tool is restricted to appropriate individuals. Inspected the documented batch processing work instructions to verify that the instructions require that access to the job scheduling tool is restricted to appropriate individuals. Inspected the job scheduling application parameter settings to verify that access to the job scheduling tool is restricted to appropriate individuals. For a sample of the individuals with access to the job scheduling tool, inspected the system access request ticket to verify that access was approved by TSDC-IT management. Inspected the organizational charts to verify that the individuals with access to the job scheduling tool are appropriate and the job functions performed by these individuals require them to have the noted level of access.	None noted.	No exceptions noted.

Tests of Operating Effectiveness
June 1, 2015 to May 31, 2016

Control Objective 10:
Controls provide reasonable assurance that processing is scheduled appropriately and exception processing exists to identify and resolve irregularities or errors.

Description of Controls						
CA #	**Control Description**	**Type**	**Classification**	**Tests of Operating Effectiveness**	**Control Exemptions**	**Results of Testing**
10.03	Jobs are added, modified or removed through the formal change management process.	Manual & Automated	Preventive	Inquired of TSDC-IT management to verify that jobs are added, modified or removed through the formal change management process. Inspected the formally documented change management procedures to verify that these procedures require that addition, modification or removal of jobs requires following the formally documented change management process. For a sample of jobs that have been added, modified or removed, inspected the supporting documentation to verify that these changes followed the formally documented change management process.	None noted.	No exceptions noted.

Tests of Operating Effectiveness
June 1, 2015 to May 31, 2016

Control Objective 11:
TSDC-IT management monitors the design and operating effectiveness of the data centre physical security and environmental protection controls that have been placed in operation by the infrastructure hosting service organizations, and follows up on identified errors or exceptions.

Description of Controls						
CA #	**Control Description**	**Type**	**Classification**	**Tests of Operating Effectiveness**	**Control Exemptions**	**Results of Testing**
11.01	The infrastructure hosting service organizations provide a planned change and maintenance calendar on an annual basis to TSDC-IT management.	Manual	Preventative	Inquired of TSDC-IT management to verify that management reviews the planned change and maintenance calendar on an annual basis. Inspected evidence of TSDC-IT management review of the planned changes and maintenance calendar provided by its sub service organizations.	None noted.	No exceptions noted.
11.02	TSDC-IT management reviews quarterly service level management reports from the infrastructure hosting service organizations, follows up on any deviations, and establishes corrective action plans as needed.	Manual	Detective	Inquired of TSDC-IT management to verify that management reviews on a quarterly basis service level management reports from its sub service organizations and follow up on any deviations and establish corrective action plans as needed. For a sample of quarterly reviews, inspected documents to verify that TSDC-IT management reviewed service level management reports from its sub service organizations and followed up on any deviations and established correction action plans as needed.	None noted.	No exceptions noted.

Tests of Operating Effectiveness
June 1, 2015 to May 31, 2016

Control Objective 11:
TSDC-IT management monitors the design and operating effectiveness of the data centre physical security and environmental protection controls that have been placed in operation by the infrastructure hosting service organizations, and follows up on identified errors or exceptions.

Description of Controls						
CA #	**Control Description**	**Type**	**Classification**	**Tests of Operating Effectiveness**	**Control Exemptions**	**Results of Testing**
11.03	TSDC-IT management reviews the scope, control objectives, and control descriptions of the infrastructure hosting service organizations' SOC 1 reports, on an annual basis, to ensure the report identifies all internal controls relevant to the TSDC-IT physical security, and environmental protection controls performed by the sub service organizations.	Manual	Preventative	Inquired of TSDC-IT management to verify that management review the scope, control objectives, and control descriptions of the sub service organizations' SOC 1 reports, on an annual basis, to determine the report identifies all internal controls relevant to TSDC-IT physical security and environmental protection controls performed by the sub service organizations. Inspected evidence of TSDC-IT management review of the sub service organizations' SOC 1 reports to determine that the scope, control objectives and control description stated in the report address all internal controls relevant to TSDC-IT physical security and environmental protection controls were included.	None noted.	No exceptions noted.
11.04	TSDC-IT management review the audit opinion and any exceptions included in the sub service organizations' SOC 1 reports, and follows up with sub service organizations to develop a corrective action plan and to identify compensating controls, if necessary, to mitigate associated risks.	Manual	Detective	Inquired of TSDC-IT management to verify that management reviews the audit opinion and any exceptions included in the sub service organizations' SOC 1 reports, and follows up with sub service organizations to develop a corrective action plan and to identify compensating controls if necessary to mitigate associated risks. Further inquiry determined that there were no adverse findings or exceptions requiring further action by management. Inspected the sub service organizations' SOC 1 reports and determined that TSDC-IT management reviewed the audit opinion and test results. Inspected evidence of TSDC-IT management review of any associated risks and determine that management developed a corrective action plan to mitigate any associated risks.	None noted.	No exceptions noted.

Tests of Operating Effectiveness
June 1, 2015 to May 31, 2016

Control Objective 11:

TSDC-IT management monitors the design and operating effectiveness of the data centre physical security and environmental protection controls that have been placed in operation by the infrastructure hosting service organizations, and follows up on identified errors or exceptions.

Description of Controls						
CA #	**Control Description**	**Type**	**Classification**	**Tests of Operating Effectiveness**	**Control Exemptions**	**Results of Testing**
11.05	TSDC-IT management requests and acknowledges updates to the sub service organizations' security and safety policies and procedures on an annual basis.	Manual	Detective	Inquired of TSDC-IT management to verify that management requests and acknowledges updates to the sub service organizations' security and safety policies and procedures on an annual basis. Inspected evidence of TSDC-IT management acknowledging updates to the sub service organizations' security and safety policies and procedures on an annual basis.	None noted.	No exceptions noted.
11.06	TSDC-IT management validates authorized TSDC-IT users with access to the data centres and notifies sub service organizations of any updates on at least a quarterly basis.	Manual	Detective	Inquired of TSDC-IT management to verify that management validates authorized TSDC-IT users with access to the data centres and notifies sub service organizations of any updates on at least quarterly basis. Inspected evidence of TSDC-IT management validation of authorized users with access to the data centres and notification to sub service organizations of any updates on at least quarterly basis.	None noted.	No exceptions noted.

Tests of Operating Effectiveness
June 1, 2015 to May 31, 2016

Control Objective 11:
TSDC-IT management monitors the design and operating effectiveness of the data centre physical security and environmental protection controls that have been placed in operation by the infrastructure hosting service organizations, and follows up on identified errors or exceptions.

Description of Controls						
CA #	**Control Description**	**Type**	**Classification**	**Tests of Operating Effectiveness**	**Control Exemptions**	**Results of Testing**
11.07	A formal and documented escalation process is used to communicate incidents that impact customer's system environments. Incidents are reviewed, monitored, and documented, and escalated to TSDC-IT customer per agreed service level agreements.	Manual	Detective	Inquired of TSDC-IT management to verify that a formal and documented escalation process is used to communicate incidents that impact customer's system environments. Inquired of TSDC-IT management to verify that documented procedures require that incidents that impact customer's system environments are reviewed, monitored, and documented, and escalated to the customer per agreed service level agreements. Inspected the escalation process document to verify that a formal and documented escalation process is used to communicate incidents that impact customer's system environments. For a sample of incidents related to data centres, inspected the supporting documents to verify that incidents that impact customer's system environments are reviewed, monitored and documented, and that evidence of resolutions are retained. In addition, inspected evidence that the incidents are escalated to the customer per agreed service level agreements.	None noted.	No exceptions noted.

Tests of Operating Effectiveness
June 1, 2015 to May 31, 2016

Control Objective 12:
Controls provide reasonable assurance that PC asset inventory initial receipts, storage and initial deployments are tracked completely and accurately.

Description of Controls						
CA #	**Control Description**	**Type**	**Classification**	**Tests of Operating Effectiveness**	**Control Exemptions**	**Results of Testing**
12.01	TSDC-IT's Depot Logistics Clerk verifies the quantity of the items on the packing slip against the actual equipment received and attaches a copy of the packing slip confirming receipt of the PC assets to a new or existing ITSM Incident Request. TSDC-IT's Depot Logistics Clerk also creates an ITSM Change Request, including an Add and Update Template, based on the Incident Request.	Manual	Preventive	Inquired of TSDC-IT's Distributed Deskside Services (DDS) team to verify that: ▪ TSDC-IT's Depot Logistics Clerk verifies the quantity of items in the packing slip information against the actual equipment received. ▪ A copy of the packing slip confirming receipt of the assets is attached to a new or existing ITSM Incident Request ticket. ▪ An ITSM Change Request ticket and an Add and Update Template are created for the items received. Inspected a sample of packing slips to verify that: ▪ The quantity of items in the packing slip was verified against the actual equipment received. ▪ An ITSM Incident Request ticket was created or updated with a copy of the packing slip, to document the shipment received. ▪ An ITSM Change Request ticket and an Add and Update Template were created for the items received.	None noted.	No exceptions noted.

Tests of Operating Effectiveness
June 1, 2015 to May 31, 2016

Control Objective 12:
Controls provide reasonable assurance that PC asset inventory initial receipts, storage and initial deployments are tracked completely and accurately.

Description of Controls

CA #	Control Description	Type	Classification	Tests of Operating Effectiveness	Control Exemptions	Results of Testing
12.02	PC Assets (i.e., laptops, desktops, network printers or tablets) are transferred out of the depots based on a ticket from TSDC-IT's client end users, TSDC-IT end users or multiple users (e.g., in the event of a large refresh project). The Depot Logistics Clerk generates a CMDB Update request through either a Change Request (i.e., multiple items) or the Field Engineer Console (i.e., single item) to change the status of the PC Asset to "In Transit" in the CMDB. The request for the asset update is assigned to the Asset Management Team to update the CMDB.	Manual	Preventive	Inquired of TSDC-IT's DDS Team Leader and members to verify that: ▪ PC Assets removed from the depots are based on an ITSM Incident Request ticket received from TSDC-IT's client end users, TSDC-IT end users or multiple users. ▪ A CMDB Update Request through either a Change Request or the Field Engineer Console is created based on the Incident Request information from TSDC-IT's client's end users, TSDC-IT end users or multiple users. This request is assigned to the Asset Management Team request for update of the PC Asset status in the CMDB to "In Transit" for the transfer of assets out of the depots. Inspected a sample of PC Assets (i.e., laptops, desktops, network printers or tablets) deployed in the period to verify that: ▪ The PC Asset was removed from the depot(s) based on an ITSM Incident Request ticket received from TSDC-IT's client end users, TSDC-IT end users or multiple users. ▪ A CMDB Update request was created for the asset(s) through either a Change Request or the Field Engineer Console, confirming transfer of the asset out of the depots, based on the ITSM Incident Request ticket received from TSDC-IT's client end users, TSDC-IT end users or multiple users. This request was to change the status of the PC Asset to "In Transit" in the CMDB.	None noted.	No exceptions noted.

Tests of Operating Effectiveness
June 1, 2015 to May 31, 2016

Control Objective 12:
Controls provide reasonable assurance that PC asset inventory initial receipts, storage and initial deployments are tracked completely and accurately.

Description of Controls						
CA #	**Control Description**	**Type**	**Classification**	**Tests of Operating Effectiveness**	**Control Exemptions**	**Results of Testing**
12.03	The Asset Management Team will only update the information for PC Assets received into or removed out from the depots, in the CMDB upon: ▪ Receipt of a Change Request, based on an Add and Update Template attached within the Change Request; or ▪ Receipt of a CMDB Update Request via the Field Engineer Console based on the update identified in the Field Engineer Console request.	Manual	Preventive	Inquired of TSDC-IT's Distributed Desktop Services (DDS) team to verify that the Asset Configuration Management Database (CMDB) is updated by an Asset Manager based on the Add and Update Template attached in the Change Request tickets or based on the Field Engineer Console request. Inspected a sample of assets received into or removed out from the depots, from Change Request or Field Engineer Console requests to determine that the Asset Configuration Management Database (CMDB) was updated by an Asset Manager upon receipt of either ▪ Change Requests, with an attached "Add and Update Template"; or ▪ Field Engineer Console requests.	None noted.	No exceptions noted.

Tests of Operating Effectiveness
June 1, 2015 to May 31, 2016

Control Objective 12:
Controls provide reasonable assurance that PC asset inventory initial receipts, storage and initial deployments are tracked completely and accurately.

Description of Controls

CA #	Control Description	Type	Classification	Tests of Operating Effectiveness	Control Exemptions	Results of Testing
12.04	On a monthly basis, TSDC-IT's IT Lead or Depots Manager conducts a physical inventory of the PC Assets in storage (i.e., at the depots). TSDC-IT's Asset Management Team reconciles the physical inventory information against the "In Stock" and "Received" assets in the Asset Configuration Management Database (CMDB). Discrepancies are identified and resolved. Results of the reconciliation are communicated to TSDC-IT's client. Results of the reconciliation are tracked in an ITSM Incident Request ticket. In order to ensure segregation of duties, IT Technicians and Depot Logistics Clerks are not involved in the physical count or the reconciliation.	Manual	Detective	Inquired of TSDC-IT's Distributed Deskside Services (DDS) team to verify that on a monthly basis, TSDC-IT's DDS Lead or Manager conducts a physical inventory of the PC Assets in storage, provides these details to the Asset Manager for reconciliation to the CMDB "In Stock" and "Received" assets, and that the results are tracked in an ITSM Incident Request ticket. Inquired of TSDC-IT's Asset Manager to verify that the physical inventory information is reconciled against the "In Stock" and "Received" assets in the Asset Configuration Management Database (CMDB) Report, and any discrepancies are identified and resolved. Inquired of TSDC-IT's Distributed Deskside Services (DDS) team to verify that, in order to ensure segregation of duties, the IT Technician and Depot logistics clerk are not involved in the count or the reconciliation. Inspected a sample of monthly physical inventory count reports to verify that the PC Assets in storage were counted by the DDS Lead or Manager, provided to the Asset Manager for reconciliation to the CMDB "In Stock' and "Received" assets, and that the results were tracked in an ITSM Incident Request ticket.	None noted	No exceptions noted.

Tests of Operating Effectiveness
June 1, 2015 to May 31, 2016

Control Objective 12:
Controls provide reasonable assurance that PC asset inventory initial receipts, storage and initial deployments are tracked completely and accurately.

Description of Controls						
CA #	**Control Description**	**Type**	**Classification**	**Tests of Operating Effectiveness**	**Control Exemptions**	**Results of Testing**
				For the same sample of monthly physical inventory count reports, inspected the PC Assets reconciliation reports to verify that the inventory of PC Assets physically in storage was reconciled to the PC Assets identified as "In Stock" and "Received" assets in the CMDB, and any discrepancies were identified and resolved. For the same sample of monthly physical inventory count reports and PC Assets reconciliation reports, inspected the reports to verify that the IT Technician and Depot Logistics Clerk were not involved in the count or the reconciliation.		
12.05	Logical access to update records in CMDB is restricted to the Asset Management Team.	Automated/ Manual	Preventative	Inquired of TSDC-IT's Asset Manager to verify that the access to update records in the CMDB is restricted to the Asset Manager. Inspected the list of TSDC-IT users with access to update records in CMDB to verify that access was restricted to the Asset Manager.	None noted.	No exceptions noted.
12.06	Physical access to inventory storage facilities is limited to authorized personnel. TSDC-IT management performs a semi-annual review of users with access to the Trinity Depot and the Clegg Road Depot based on information provided by TSDC-IT's client	Manual	Detective	Inquired of TSDC-IT's Distributed Deskside Services (DDS) team to verify that the physical access for TSDC-IT staff to the PC assets inventory at the Trinity and Clegg Road Depots is reviewed on a semi-annual basis by appropriate TSDC-IT management. Inspected the supporting documentation for a sample of access reviews relating to physical access to the PC assets inventory at the Trinity and Clegg Road Depots, to verify that the semi-annual access reviews were performed for TSDC-IT staff, and that any such staff access identified as being inappropriate was resolved.	None noted.	No exceptions noted.

Section V
Other Information Provided by
Toronto Service Delivery Centre – Information Technology Outsourcing

V. Other Information Provided by Toronto Service Delivery Centre – Information Technology Outsourcing

Additional Information Provided Regarding Disaster Recovery Planning

The TSDC-IT Business Continuity Team coordinates the Disaster Recovery efforts for systems hosted by the TSDC-IT. This includes:

- Formulating an appropriate Disaster Recovery strategy for each customer to recover critical business functions as per agreed recovery time and recovery point objectives.
- Developing, maintaining and exercising Disaster Recovery Plans for customers.
- Developing, maintaining and exercising Disaster Recovery and Life Safety plans for the TSDC-IT infrastructure and facility.
- Providing optional, value-added services, including Business Impact Analysis, Risk Management, and Business Continuity plans including Emergency Response and Life Safety Plans.

Section VI
Glossary of Terms

VI. Glossary of Terms

Term	Definition
AICPA	American Institute of Certified Public Accountants
AM	Applications Management
AT 801	Attestation Section 801
BPO	Business Process Outsourcing
CAB	Change Advisory Board
CMDB	Configuration Management Data Base
DBA	Database Administrator
DDS	Distributed Deskside Services
EARS	Extended Action Request System
GRC Access Control	Governance, Risk and Compliance Access Control
ICAM	Identity, Credentials and Access Management
IM	Infrastructure Management
ISO	International Organization for Standardization
ITIL	IT Infrastructure Library
ITSM	IT Service Management System
LAN	Local Area Network
OTACE	On Time Above Customer Expectations
PO	Purchase Order
PwC	PricewaterhouseCoopers LLP
PIN	Personal Identification Number
PMBOK	Project Management Institute's Project Management Body of Knowledge
QMS	Quality Management System
SDLC	Service Delivery Life Cycle
SLA	Service Level Agreement
SOC	Service Organization Controls
TSDC	Toronto Service Delivery Centre
SDC-IT	Toronto Service Delivery Centre – Information Technology

Building Owners and Managers Association (BOMA) INTERROGATORY #013

Reference:
Exhibit A, Tab 5, Schedule 3, Attachments

Interrogatory:
Attachment 1

(a) Please provide explanation for the sharp increase in fees for General Counsel, CEO/Chairman, and Chief Financial Officer from 2016 to 2017.

(b) Please provide what specific amounts are included in each of the above, including the amounts that are constitute the compensation of the CEO, CFO, and General Counsel.

(c) Please explain why HONI is paying via an agreement for its own CEO, CFO, and General Counsel, rather than as direct salaries of HONI itself.

(d) Do ratepayers benefit or lose by such an arrangement?

(e) Please provide any other changes in the nature of the services provided in 2017 and 2018, compared to 2016.

(f) When the President of HONI and Hydro One Inc. are the same person, how do you ensure a dispute resolution process that is fair for HONI ratepayers?

(g) Please provide updates, if any, made to the Attachments 1 through 12, for the years 2017 and 2018.

Attachments 1 and 2

(h) Please explain why General Counsel and corporate secretarial services provided flow in both directions. Please detail the differences in these services provided by, and to, HONI.

(i) Have the Service Agreements all been revised? Have the terms been extended? Describe each Telecom Service Agreement.

Attachment 3

(j) Please justify the increase in fees under the Agreement to $17,450 (and $17,970 in 2018).

(k) Are these fees fixed in advance, or do they vary with the nature and volume of services provided?

(l) Please explain the apparent duplication in the description of Power Systems operation of Telecom Services and all Business System operations of the Telecom Services Agreement.

(m) Please explain, in detail, how the amounts in respect of each of the four services are arrived at, on Page 7 of Schedules A and B, respectively.

Attachment 4

(n) HONI for Remotes: Exhibit A, Tab 5, Schedule 3, Page 3: Please provide the amount paid to HONI from Remote Under the Master Agreement for Utility Operation Services. Please explain why the compensation for 2018 is essentially the same as for 2017.

Attachment 5

(o) Why are the amounts paid to HONI from B2M LP nominal? Please detail the services provided, including the fully allocated costs of providing the services.

Response:

a) The increase in fees for General Counsel and Corporate Secretariat services relates to an increase in the Corporate Secretariat compensation due to promotion and increased accountabilities. The increase in President/CEO and CFO costs are due to the increased compensation levels for these positions.

b) Please see Exhibit I, Tab 11, Schedule 23 for CEO and CFO compensation and Exhibit I, Tab 12, Schedule 1 for General Counsel compensation.

c) CEO, CFO and General Counsel costs reside in Hydro One Inc. Any services they provide to Hydro One Networks Inc. ("HONI") are paid thorough a service level agreement between Hydro One Inc. and HONI as per the OEB's Affiliate Relationships Code.

d) Using an OEB-approved methodology of allocating costs, the ratepayers benefit from paying only those costs directly linked to the services provided to HONI.

e) There are no changes in the nature of services provided.

f) The OEB's Affiliate Relationships Code prescribes standards of conduct for affiliates and sets out the objective parameters for allocating the costs of shared corporate services between affiliates in a manner that protects ratepayers.

g) There are no updates at this time.

h) The General Counsel and Corporate Secretary services provided by Hydro One Inc. to HONI are associated with the costs of the Senior VP and General Counsel and the Corporate Secretary and Corporate Ethics Officer. General Counsel and Secretary Services provided by HONI are related to the legal and corporate secretariat departments. For a specific description of the services provided by each function and the related cost allocation, please refer to Exhibit C1, Tab 3, Schedule 3 and Attachment 1 of Exhibit C1, Tab 6, Schedule 1.

i) The service level agreements are revised annually. See response (g) above. See Attachment 3 to Exhibit A, Tab 5, Schedule 3 for details on the telecommunications services agreement.

j) The increase in telecommunication management services is primarily related to costs of operating and managing new telecom devices and networks deployed to comply with new NERC CIPv5 requirement, as well as the natural growth of the telecommunications network experienced and anticipated due to power system growth. (For example, recently constructed stations are incorporated into HONI's private communication network). In addition to any increases to the scope of work, part of the annual increase can be attributed to annual labour rate adjustments.

k) Telecommunication management services fees are covered by bi-annual affiliate agreements between HONI and HOT. The service fees are forward looking, but are subject to adjustment depending on the timing of projects and the validating assumptions when fees were established.

l) There is no duplication of effort in performance of telecommunication management services between the power system and the business system. The apparent duplication comes from similar types of activities that are being performed by HOT in relation to both networks that are independent and separate. The power system network provides required telecommunication services to protect, monitor, and control the provincial transmission grid, while the business system network is dedicated to the voice and data needs of the corporation (e.g. voice communication to work centers, internet, email, work management systems, servers and data traffic, etc.).

m) The amounts referred to represent the effort in delivering these services and include HOT labour, processes, as well as all required support systems, such as network management systems, servers, etc.

n) Costs for these services are charged based on time and material. Forward looking costs are estimated based on a review of historical costs incurred. Costs for 2018 are projected to be very close to those in 2017.

o) Services provided to B2M LP represent a small portion of overall common corporate costs. These costs are described in Exhibit C1, Tab 2, Schedule 1 of B2M's EB-2015-0026 application.

Building Owners and Managers Association (BOMA) INTERROGATORY #014

Reference:
Exhibit A, Tab 6, Schedule 5, Accounting Information

Interrogatory:
(a) Please provide a copy of Accounting Standards Codification 718 – Compensation – Stock Compensation.

(b) Please provide the amount of each regulatory asset in the most recent HONI annual and quarterly corporate financial statements, and the years in which these costs will be recovered in rates. Please reconcile any difference between the corporate statements and the regulatory numbers.

Response:
(a) Please see the requested document (ASC 718) attached.

(b) Hydro One only prepares audited annual financial statements for its transmission and distribution businesses, which are filed with the OEB. Please refer to Hydro One Transmission's 2015 audited financial statements filed with the OEB as Attachment 2 to Exhibit A, Tab 7, Schedule 1. The amounts filed in the Exhibit F of the current application are consistent with the balances as disclosed in 2015 audited transmission financial statements. Please refer to Exhibit F1, Tab1, Schedule 1 for accounts requested for disposition within Hydro One's current application. Any remaining accounts are to be brought forward in a future application. Please see the attached reconciliation between the transmission financial statements provided and amounts noted in Exhibit F2, Tab1, Schedule 3.

Witness: Samir Chhelavda

Filed: 2016-08-31
EB-2016-0160
I-02-014
Attachment 1
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August 12, 2016

718 Compensation—Stock Compensation

718 Compensation—Stock Compensation
10 Overall

718-10-00 Status

General Note: The Status Section identifies changes to this Subtopic resulting from Accounting Standards Updates. The Section provides references to the affected Codification content and links to the related Accounting Standards Updates. Nonsubstantive changes for items such as editorial, link and similar corrections are included separately in Maintenance Updates.

General

718-10-00-1 The following table identifies the changes made to this Subtopic.

Paragraph	Action	Accounting Standards Update	Date
Public Business Entity	Amended	Maintenance Update 2016-11	06/27/2016
Public Business Entity	Added	Accounting Standards Update No. 2016-09	03/30/2016
718-10-25-1	Amended	Accounting Standards Update No. 2012-04	10/01/2012
718-10-25-6	Amended	Accounting Standards Update No. 2016-09	03/30/2016
718-10-25-14A	Added	Accounting Standards Update No. 2010-13	04/16/2010
718-10-25-17	Amended	Accounting Standards Update No. 2012-04	10/01/2012
718-10-25-18	Amended	Accounting Standards Update No. 2016-09	03/30/2016
718-10-25-19	Superseded	Accounting Standards Update No. 2016-09	03/30/2016
718-10-25-19A	Added	Accounting Standards Update No. 2016-09	03/30/2016
718-10-30-20A	Added	Accounting Standards Update No. 2016-09	03/30/2016
718-10-30-20B	Added	Accounting Standards Update No. 2016-09	03/30/2016
718-10-30-28	Amended	Accounting Standards Update No. 2016-09	03/30/2016
718-10-30-28	Added	Accounting Standards Update No. 2014-12	06/19/2014
718-10-35-3	Amended	Accounting Standards Update No. 2016-09	03/30/2016
718-10-35-12	Amended	Accounting Standards Update No. 2016-09	03/30/2016
718-10-35-13	Superseded	Accounting Standards Update No. 2016-09	03/30/2016
718-10-45-1	Amended	Accounting Standards Update No. 2016-09	03/30/2016
718-10-50-2	Amended	Accounting Standards Update No. 2016-09	03/30/2016
718-10-50-2A	Added	Accounting Standards Update No. 2016-09	03/30/2016
718-10-55-2	Amended	Accounting Standards Update No. 2016-09	03/30/2016
718-10-55-30	Amended	Accounting Standards Update No. 2016-09	03/30/2016
718-10-55-34A	Added	Accounting Standards Update No. 2016-09	03/30/2016
718-10-55-45	Amended	Accounting Standards Update No. 2016-09	03/30/2016
718-10-55-50A	Added	Accounting Standards Update No. 2016-09	03/30/2016
718-10-55-65	Amended	Accounting Standards Update No. 2010-13	04/16/2010
718-10-55-76	Amended	Accounting Standards Update No. 2016-09	03/30/2016
718-10-55-88	Amended	Accounting Standards Update No. 2014-12	06/19/2014
718-10-55-137	Amended	Accounting Standards Update No. 2016-09	03/30/2016
718-10-65-1	Superseded	Accounting Standards Update No. 2016-09	03/30/2016
718-10-65-2	Added	Accounting Standards Update No. 2010-13	04/16/2010
718-10-65-3	Added	Accounting Standards Update No. 2014-12	06/19/2014
718-10-65-4 through 65-10	Added	Accounting Standards Update No. 2016-09	03/30/2016

718-10-05 Overview and Background

General Note: The Overview and Background Section provides overview and background material for the guidance contained in the Subtopic. It does not provide the historical background or due process. It may contain certain material that users generally consider useful to understand the typical situations addressed by the standards. The Section does not summarize the accounting and reporting requirements.

General

718-10-05-1 The Compensation—Stock Compensation Topic provides guidance on **share-based payment transactions** with **employees**. This Topic includes the following Subtopics:

a. Overall

b. Awards Classified as Equity

c. Awards Classified as Liabilities

d. **Employee Stock Ownership Plans**

e. Employee Stock Purchase Plans

f. Income Taxes.

718-10-05-2 This Topic does not provide guidance for nonemployee share-based payment transactions. See Subtopic 505-50 for guidance on nonemployee share transactions.

718-10-05-3 This Subtopic provides general guidance related to **share-based payment arrangements** with employees. This Subtopic and Subtopics 718-20 and 718-30 are interrelated and the required guidance may be located in either this Subtopic or one of the other Subtopics. In general, material that relates to both equity and liability instruments is included in this Subtopic, while material more specifically related to either equity or liability instruments is included in their respective Subtopics.

718-10-10 Objectives

General Note: The Objectives Section provides the high-level objectives that the Subtopic is intended to accomplish or attain. The Section does not summarize or discuss the main principles of accounting and reporting requirements.

General

718-10-10-1 The objective of accounting for transactions under **share-based payment arrangements** with employees is to recognize in the financial statements the **employee** services received in exchange for equity instruments issued or liabilities incurred and the related cost to the entity as those services are consumed. This Topic uses the terms *compensation* and *payment* in their broadest senses to refer to the consideration paid for employee services.

718-10-10-2 This Topic requires that the cost resulting from all **share-based payment transactions** be recognized in the financial statements. This Topic establishes **fair value** as the measurement objective in accounting for share-based payment arrangements and requires all entities to apply a fair-value-based measurement method in accounting for share-based payment transactions with employees except for equity instruments held by **employee stock ownership plans**.

718-10-15 Scope and Scope Exceptions

General Note: The Scope and Scope Exceptions Section outlines the items (for example, the entities, transactions, instruments, or events) to which the guidance in the Subtopic does or does not apply. In some cases, the Section may contain definitional or other text to frame the scope.

General

> Overall Guidance

718-10-15-1 The Scope Section of the Overall Subtopic establishes the pervasive scope for all Subtopics of the Compensation—Stock Compensation Topic. Unless explicitly addressed within specific Subtopics, the following scope guidance applies to all Subtopics of the Compensation—Stock Compensation Topic, with the exception of Subtopic 718-50, which has its own discrete scope.

> Entities

718-10-15-2 The guidance in the Compensation—Stock Compensation Topic applies to all entities that enter into **share-based payment transactions** with employees.

> Transactions

718-10-15-3 The guidance in the Compensation—Stock Compensation Topic applies to all share-based payment transactions in which an entity acquires **employee** services by issuing (or offering to issue) its shares, share options, or other equity instruments or by incurring liabilities to an employee that meet either of the following conditions:

a. The amounts are based, at least in part, on the price of the entity's shares or other equity instruments. (The phrase *at least in part* is used because an **award** of share-based compensation may be indexed to both the price of an entity's shares and something else that is neither the price of the entity's shares nor a **market**, **performance**, or **service condition**.)

b. The awards require or may require **settlement** by issuing the entity's equity shares or other equity instruments.

718-10-15-4 Share-based payments awarded to an employee of the reporting entity by a related party or other holder of an **economic interest in the entity** as compensation for services provided to the entity are share-based payment transactions to be accounted for under this Topic unless the transfer is clearly for a purpose other than compensation for services to the reporting entity. The substance of such a transaction is that the economic interest holder makes a capital contribution to the reporting entity, and that entity makes a share-based payment to its employee in exchange for services rendered. An example of a situation in which such a transfer is not compensation is a transfer to settle an obligation of the economic interest holder to the employee that is unrelated to employment by the entity.

718-10-15-5 The guidance in this Topic does not apply to the following payment transactions:

a. Share-based transactions for other than employee services (see Subtopic 505-50 for guidance on those transactions).

718-10-15-6 Paragraphs 805-30-30-9 through 30-13 provide guidance on determining whether share-based payment awards issued in a business combination are part of the consideration transferred in exchange for the acquiree, and therefore in the scope of Topic 805, or are for continued service to be recognized in the postcombination period in accordance with this Topic.

718-10-15-7 The guidance in the Overall Subtopic does not apply to equity instruments held by an employee stock ownership plan.

718-10-20 Glossary

General Note: The Master Glossary contains all terms identified as glossary terms throughout the Codification. Clicking on any term in the Master Glossary will display where the term is used. The Master Glossary may contain identical terms with different definitions, some of which may not be appropriate for a particular Subtopic. For any particular Subtopic, users should only use the glossary terms included in the particular Subtopic Glossary Section (Section 20).

Award
The collective noun for multiple instruments with the same terms and conditions granted at the same time either to a single employee or to a group of employees. An award may specify multiple vesting dates, referred to as graded vesting, and different parts of an award may have different expected terms. References to an award also apply to a portion of an award.

Blackout Period
A period of time during which exercise of an equity share option is contractually or legally prohibited.

Broker-Assisted Cashless Exercise
The simultaneous exercise by an employee of a share option and sale of the shares through a broker (commonly referred to as a broker-assisted exercise).

Generally, under this method of exercise:

a. The employee authorizes the exercise of an option and the immediate sale of the option shares in the open market.

b. On the same day, the entity notifies the broker of the sale order.

c. The broker executes the sale and notifies the entity of the sales price.

d. The entity determines the minimum statutory tax-withholding requirements.

e. By the settlement day (generally three days later), the entity delivers the stock certificates to the broker.

f. On the settlement day, the broker makes payment to the entity for the exercise price and the minimum statutory withholding taxes and remits the balance of the net sales proceeds to the employee.

Calculated Value
A measure of the value of a share option or similar instrument determined by substituting the historical volatility of an appropriate industry sector index for the expected volatility of a nonpublic entity's share price in an option-pricing model.

Call Option
A contract that allows the holder to buy a specified quantity of stock from the writer of the contract at a fixed price for a given period. See Option and Purchased Call Option.

Closed-Form Model
A valuation model that uses an equation to produce an estimated fair value. The Black-Scholes-Merton formula is a closed-form model. In the context of option valuation, both closed-form models and lattice models are based on risk-neutral valuation and a contingent claims framework. The payoff of a contingent claim, and thus its value, depends on the value(s) of one or more other assets. The contingent claims framework is a valuation methodology that explicitly recognizes that dependency and values the contingent claim as a function of the value of the underlying asset(s). One application of that methodology is risk-neutral valuation in which the contingent claim can be replicated by a combination of the underlying asset and a risk-free bond. If that replication is possible, the value of the contingent claim can be determined without estimating the expected returns on the underlying asset. The Black-Scholes-Merton formula is a special case of that replication.

Combination Award
An award with two or more separate components, each of which can be separately exercised. Each component of the award is actually a separate award, and compensation cost is measured and recognized for each component.

Derived Service Period
A service period for an award with a market condition that is inferred from the application of certain valuation techniques used to estimate fair value. For example, the derived service period for an award of share options that the employee can exercise only if the share price increases by 25 percent at any time during a 5-year period can be inferred from certain valuation techniques. In a lattice model, that derived service period represents the duration of the median of the distribution of share price paths on which the market condition is satisfied. That median is the middle share price path (the midpoint of the distribution of paths) on which the market condition is satisfied. The duration is the period of time from the service inception date to the expected date of satisfaction (as inferred from the valuation technique). If the derived service period is three years, the estimated requisite service period is three years and all compensation cost would be recognized over that period, unless the market condition was satisfied at an earlier date. Compensation cost would not be recognized beyond three years even if after the grant date the entity determines that it is not probable that the market condition will be satisfied within that period. Further, an award of fully vested, deep out-of-the-money share options has a derived service period that must be determined from the valuation techniques used to estimate fair value. See Explicit Service Period, Implicit Service Period, and Requisite Service Period.

Economic Interest in an Entity
Any type or form of pecuniary interest or arrangement that an entity could issue or be a party to, including equity securities; financial instruments with characteristics of equity, liabilities, or both; long-term debt and other debt-financing arrangements; leases; and contractual arrangements such as management contracts, service contracts, or intellectual property licenses.

Employee
An individual over whom the grantor of a share-based compensation award exercises or has the right to exercise sufficient control to establish an employer-employee relationship based on common law as illustrated in case law and currently under U.S. Internal Revenue Service (IRS) Revenue Ruling 87-41. A reporting entity based in a foreign jurisdiction would determine whether an employee-employer relationship exists based on the pertinent laws of that

jurisdiction. Accordingly, a grantee meets the definition of an employee if the grantor consistently represents that individual to be an employee under common law. The definition of an employee for payroll tax purposes under the U.S. Internal Revenue Code includes common law employees. Accordingly, a grantor that classifies a grantee potentially subject to U.S. payroll taxes as an employee also must represent that individual as an employee for payroll tax purposes (unless the grantee is a leased employee as described below). A grantee does not meet the definition of an employee solely because the grantor represents that individual as an employee for some, but not all, purposes. For example, a requirement or decision to classify a grantee as an employee for U.S. payroll tax purposes does not, by itself, indicate that the grantee is an employee because the grantee also must be an employee of the grantor under common law.

A leased individual is deemed to be an employee of the lessee if all of the following requirements are met:

a. The leased individual qualifies as a common law employee of the lessee, and the lessor is contractually required to remit payroll taxes on the compensation paid to the leased individual for the services provided to the lessee.

b. The lessor and lessee agree in writing to all of the following conditions related to the leased individual:

   1. The lessee has the exclusive right to grant stock compensation to the individual for the employee service to the lessee.

   2. The lessee has a right to hire, fire, and control the activities of the individual. (The lessor also may have that right.)

   3. The lessee has the exclusive right to determine the economic value of the services performed by the individual (including wages and the number of units and value of stock compensation granted).

   4. The individual has the ability to participate in the lessee's employee benefit plans, if any, on the same basis as other comparable employees of the lessee.

   5. The lessee agrees to and remits to the lessor funds sufficient to cover the complete compensation, including all payroll taxes, of the individual on or before a contractually agreed upon date or dates.

A nonemployee director does not satisfy this definition of employee. Nevertheless, nonemployee directors acting in their role as members of a board of directors are treated as employees if those directors were elected by the employer's shareholders or appointed to a board position that will be filled by shareholder election when the existing term expires. However, that requirement applies only to awards granted to nonemployee directors for their services as directors. Awards granted to those individuals for other services shall be accounted for as awards to nonemployees.

Employee Stock Ownership Plan

An employee stock ownership plan is an employee benefit plan that is described by the Employee Retirement Income Security Act of 1974 and the Internal Revenue Code of 1986 as a stock bonus plan, or combination stock bonus and money purchase pension plan, designed to invest primarily in employer stock. Also called an employee share ownership plan.

Equity Restructuring

A nonreciprocal transaction between an entity and its shareholders that causes the per-share fair value of the shares underlying an option or similar award to change, such as a stock dividend, stock split, spinoff, rights offering, or recapitalization through a large, nonrecurring cash dividend.

Explicit Service Period

A service period that is explicitly stated in the terms of a share-based payment award. For example, an award stating that it vests after three years of continuous employee service from a given date (usually the grant date) has an explicit service period of three years. See Derived Service Period, Implicit Service Period, and Requisite Service Period.

Fair Value

The amount at which an asset (or liability) could be bought (or incurred) or sold (or settled) in a current transaction between willing parties, that is, other than in a forced or liquidation sale.

Freestanding Financial Instrument

A financial instrument that meets either of the following conditions:

a. It is entered into separately and apart from any of the entity's other financial instruments or equity transactions.

b. It is entered into in conjunction with some other transaction and is legally detachable and separately exercisable.

Grant Date

The date at which an employer and an employee reach a mutual understanding of the key terms and conditions of a share-based payment award. The employer becomes contingently obligated on the grant date to issue equity instruments or transfer assets to an employee who renders the requisite service. Awards made under an arrangement that is subject to shareholder approval are not deemed to be granted until that approval is obtained unless approval is essentially a formality (or perfunctory), for example, if management and the members of the board of directors control enough votes to approve the arrangement. Similarly, individual awards that are subject to approval by the board of directors, management, or both are not deemed to be granted until all such approvals are obtained. The grant date for an award of equity instruments is the date that an employee begins to benefit from, or be adversely affected by, subsequent changes in the price of the employer's equity shares. Paragraph 718-10-25-5 provides guidance on determining the grant date. See Service Inception Date.

Implicit Service Period

A service period that is not explicitly stated in the terms of a share-based payment award but that may be inferred from an analysis of those terms and other facts and circumstances. For instance, if an award of share options vests upon the completion of a new product design and it is probable that the design will be completed in 18 months, the implicit service period is 18 months. See Derived Service Period, Explicit Service Period, and Requisite Service Period.

Intrinsic Value

The amount by which the fair value of the underlying stock exceeds the exercise price of an option. For example, an option with an exercise price of $20 on a stock whose current market price is $25 has an intrinsic value of $5. (A nonvested share may be described as an option on that share with an exercise price of zero. Thus, the fair value of a share is the same as the intrinsic value of such an option on that share.)

Lattice Model

A model that produces an estimated fair value based on the assumed changes in prices of a financial instrument over successive periods of time. The binomial model is an example of a lattice model. In each time period, the model assumes that at least two price movements are possible. The lattice represents the evolution of the value of either a financial instrument or a market variable for the purpose of valuing a financial instrument. In this context, a lattice model is based on risk-neutral valuation and a contingent claims framework. See Closed-Form Model for an explanation of the terms risk-neutral valuation and contingent claims framework.

Market Condition

A condition affecting the exercise price, exercisability, or other pertinent factors used in determining the fair value of an award under a share-based payment arrangement that relates to the achievement of either of the following:

a. A specified price of the issuer's shares or a specified amount of intrinsic value indexed solely to the issuer's shares

b. A specified price of the issuer's shares in terms of a similar (or index of similar) equity security (securities). The term similar as used in this definition refers to an equity security of another entity that has the same type of residual rights. For example, common stock of one entity generally would be similar to the common stock of another entity for this purpose.

Measurement Date

The date at which the equity share price and other pertinent factors, such as expected volatility, that enter into measurement of the total recognized amount of compensation cost for an award of share-based payment are fixed.

Modification

A change in any of the terms or conditions of a share-based payment award.

Nonpublic Entity

Any entity other than one that meets any of the following criteria:

a. Has equity securities that trade in a public market either on a stock exchange (domestic or foreign) or in an over-the-counter market, including securities quoted only locally or regionally

b. Makes a filing with a regulatory agency in preparation for the sale of any class of equity securities in a public market

c. Is controlled by an entity covered by the preceding criteria.

An entity that has only debt securities trading in a public market (or that has made a filing with a regulatory agency in preparation to trade only debt securities) is a nonpublic entity.

Nonvested Shares

Shares that an entity has not yet issued because the agreed-upon consideration, such as employee services, has not yet been received. Nonvested shares cannot be sold. The restriction on sale of nonvested shares is due to the forfeitability of the shares if specified events occur (or do not occur).

Not-for-Profit Entity

An entity that possesses the following characteristics, in varying degrees, that distinguish it from a business entity:

a. Contributions of significant amounts of resources from resource providers who do not expect commensurate or proportionate pecuniary return

b. Operating purposes other than to provide goods or services at a profit

c. Absence of ownership interests like those of business entities.

Entities that clearly fall outside this definition include the following:

a. All investor-owned entities

b. Entities that provide dividends, lower costs, or other economic benefits directly and proportionately to their owners, members, or participants, such as mutual insurance entities, credit unions, farm and rural electric cooperatives, and employee benefit plans.

Option

Unless otherwise stated, a call option that gives the holder the right to purchase shares of common stock from the reporting entity in accordance with an agreement upon payment of a specified amount. Options include, but are not limited to, options granted to employees and stock purchase agreements entered into with employees. Options are considered securities. See Call Option.

Performance Condition

A condition affecting the vesting, exercisability, exercise price, or other pertinent factors used in determining the fair value of an award that relates to both of the following:

a. An employee's rendering service for a specified (either explicitly or implicitly) period of time

b. Achieving a specified performance target that is defined solely by reference to the employer's own operations (or activities).

Attaining a specified growth rate in return on assets, obtaining regulatory approval to market a specified product, selling shares in an initial public offering or other financing event, and a change in control are examples of performance conditions. A performance target also may be defined by reference to the same performance measure of another entity or group of entities. For example, attaining a growth rate in earnings per share (EPS) that exceeds the average growth rate in EPS of other entities in the same industry is a performance condition. A performance target might pertain either to the performance of the entity as a whole or to some part of the entity, such as a division or an individual employee.

Probable

The future event or events are likely to occur.

Public Business Entity

A public business entity is a business entity meeting any one of the criteria below. Neither a not-for-profit entity nor an employee benefit plan is a business entity.

a. It is required by the U.S. Securities and Exchange Commission (SEC) to file or furnish financial statements, or does file or furnish financial statements (including voluntary filers), with the SEC (including other entities whose financial statements or financial information are required to be or are included in a filing).

b. It is required by the Securities Exchange Act of 1934 (the Act), as amended, or rules or regulations promulgated under the Act, to file or furnish financial statements with a regulatory agency other than the SEC.

c. It is required to file or furnish financial statements with a foreign or domestic regulatory agency in preparation for the sale of or for purposes of issuing securities that are not subject to contractual restrictions on transfer.

d. It has issued, or is a conduit bond obligor for, securities that are traded, listed, or quoted on an exchange or an over-the-counter market.

e. It has one or more securities that are not subject to contractual restrictions on transfer, and it is required by law, contract, or regulation to prepare U.S. GAAP financial statements (including notes) and make them publicly available on a periodic basis (for example, interim or annual periods). An entity must meet both of these conditions to meet this criterion.

An entity may meet the definition of a public business entity solely because its financial statements or financial information is included in another entity's filing with the SEC. In that case, the entity is only a public business entity for purposes of financial statements that are filed or furnished with the SEC.

Public Entity

An entity that meets any of the following criteria:

a. Has equity securities that trade in a public market, either on a stock exchange (domestic or foreign) or in an over-the-counter market, including securities quoted only locally or regionally

b. Makes a filing with a regulatory agency in preparation for the sale of any class of equity securities in a public market

c. Is controlled by an entity covered by the preceding criteria. That is, a subsidiary of a public entity is itself a public entity.

An entity that has only debt securities trading in a public market (or that has made a filing with a regulatory agency in preparation to trade only debt securities) is not a public entity.

Purchased Call Option

A contract that allows the reporting entity to buy a specified quantity of its own stock from the writer of the contract at a fixed price for a given period. See Call Option.

Related Parties

Related parties include:

a. Affiliates of the entity

b. Entities for which investments in their equity securities would be required, absent the election of the fair value option under the Fair Value Option Subsection of Section 825-10-15, to be accounted for by the equity method by the investing entity

c. Trusts for the benefit of employees, such as pension and profit-sharing trusts that are managed by or under the trusteeship of management

d. Principal owners of the entity and members of their immediate families

e. Management of the entity and members of their immediate families

f. Other parties with which the entity may deal if one party controls or can significantly influence the management or operating policies of the other to an extent that one of the transacting parties might be prevented from fully pursuing its own separate interests

g. Other parties that can significantly influence the management or operating policies of the transacting parties or that have an ownership interest in one of the transacting parties and can significantly influence the other to an extent that one or more of the transacting parties might be prevented from fully pursuing its own separate interests.

Reload Feature and Reload Option

A reload feature provides for automatic grants of additional options whenever an employee exercises previously granted options using the entity's shares, rather than cash, to satisfy the exercise price. At the time of exercise using shares, the employee is automatically granted a new option, called a reload option, for the shares used to exercise the previous option.

Requisite Service Period

The period or periods during which an employee is required to provide service in exchange for an award under a share-based payment arrangement. The service that an employee is required to render during that period is referred to as the requisite service. The requisite service period for an award that has only a service condition is presumed to be the vesting period, unless there is clear evidence to the contrary. If an award requires future service for vesting, the entity cannot define a prior period as the requisite service period. Requisite service periods may be explicit, implicit, or derived, depending on the terms of the share-based payment award.

Restricted Share

A share for which sale is contractually or governmentally prohibited for a specified period of time. Most grants of shares to employees are better termed nonvested shares because the limitation on sale stems solely from the forfeitability of the shares before employees have satisfied the necessary service or performance condition(s) to earn the rights to the shares. Restricted shares issued for consideration other than employee services, on the other hand, are fully paid for immediately. For those shares, there is no period analogous to a requisite service period during which the issuer is unilaterally obligated to issue shares when the purchaser pays for those shares, but the purchaser is not obligated to buy the shares. The term restricted shares refers only to fully vested and outstanding shares whose sale is contractually or governmentally prohibited for a specified period of time. Vested equity instruments that are transferable to an employee's immediate family members or to a trust that benefits only those family members are restricted if the transferred instruments retain the same prohibition on sale to third parties. See Nonvested Shares.

Restriction

A contractual or governmental provision that prohibits sale (or substantive sale by using derivatives or other means to effectively terminate the risk of future changes in the share price) of an equity instrument for a specified period of time.

Securities and Exchange Commission Registrant

An entity (or an entity that is controlled by an entity) that meets any of the following criteria:

a. It has issued or will issue debt or equity securities that are traded in a public market (a domestic or foreign stock exchange or an over-the-counter market, including local or regional markets).

b. It is required to file financial statements with the Securities and Exchange Commission (SEC).

c. It provides financial statements for the purpose of issuing any class of securities in a public market.

Service Condition

A condition affecting the vesting, exercisability, exercise price, or other pertinent factors used in determining the fair value of an award that depends solely on an employee rendering service to the employer for the requisite service period. A condition that results in the acceleration of vesting in the event of an employee's death, disability, or termination without cause is a service condition.

Service Inception Date

The date at which the requisite service period begins. The service inception date usually is the grant date, but the service inception date may differ from the grant date (see Example 6 [see paragraph 718-10-55-107]).

Settlement of an Award

An action or event that irrevocably extinguishes the issuing entity's obligation under a share-based payment award. Transactions and events that constitute settlements include the following:

a. Exercise of a share option or lapse of an option at the end of its contractual term

b. Vesting of shares

c. Forfeiture of shares or share options due to failure to satisfy a vesting condition

d. An entity's repurchase of instruments in exchange for assets or for fully vested and transferable equity instruments.

The vesting of a share option is not a settlement because the entity remains obligated to issue shares upon exercise of the option.

Share Option

A contract that gives the holder the right, but not the obligation, either to purchase (to call) or to sell (to put) a certain number of shares at a predetermined price for a specified period of time. Most share options granted to employees under share-based compensation arrangements are call options, but some may be put options.

Share Unit

A contract under which the holder has the right to convert each unit into a specified number of shares of the issuing entity.

Share-Based Payment Arrangements

An arrangement under which either of the following conditions is met:

a. One or more suppliers of goods or services (including employees) receive awards of equity shares, equity share options, or other equity instruments.

b. The entity incurs liabilities to suppliers that meet either of the following conditions:

1. The amounts are based, at least in part, on the price of the entity's shares or other equity instruments. (The phrase at least in part is used because an award may be indexed to both the price of the entity's shares and something other than either the price of the entity's shares or a market, performance, or service condition.)

2. The awards require or may require settlement by issuance of the entity's shares.

The term shares includes various forms of ownership interest that may not take the legal form of securities (for example, partnership interests), as well as other interests, including those that are liabilities in substance but not in form. Equity shares refers only to shares that are accounted for as equity.

Also called share-based compensation arrangements.

Share-Based Payment Transactions

A transaction under a share-based payment arrangement, including a transaction in which an entity acquires goods or services because related parties or other holders of economic interests in that entity awards a share-based payment to an employee or other supplier of goods or services for the entity's benefit. Also called share-based compensation transactions.

Tandem Award

An award with two or more components in which exercise of one part cancels the other(s).

Terms of a Share-Based Payment Award

The contractual provisions that determine the nature and scope of a share-based payment award. For example, the exercise price of share options is one of the terms of an award of share options. As indicated in paragraph 718-10-25-15, the written terms of a share-based payment award and its related arrangement, if any, usually provide the best evidence of its terms. However, an entity's past practice or other factors may indicate that some aspects of the substantive terms differ from the written terms. The substantive terms of a share-based payment award, as those terms are mutually understood by the entity and a party (either an employee or a nonemployee) who receives the award, provide the basis for determining the rights conveyed to a party and the obligations imposed on the issuer, regardless of how the award and related arrangement, if any, are structured. See paragraph 718-10-30-5.

Time Value

The portion of the fair value of an option that exceeds its intrinsic value. For example, a call option with an exercise price of $20 on a stock whose current market price is $25 has intrinsic value of $5. If the fair value of that option is $7, the time value of the option is $2 ($7 – $5).

Vest

To earn the rights to. A share-based payment award becomes vested at the date that the employee's right to receive or retain shares, other instruments, or cash under the award is no longer contingent on satisfaction of either a service condition or a performance condition. Market conditions are not vesting conditions.

The stated vesting provisions of an award often establish the requisite service period, and an award that has reached the end of the requisite service period is vested. However, as indicated in the definition of requisite service period, the stated vesting period may differ from the requisite service period in certain circumstances. Thus, the more precise (but cumbersome) terms would be options, shares, or awards for which the requisite service has been rendered and end of the requisite service period.

Volatility

A measure of the amount by which a financial variable such as a share price has fluctuated (historical volatility) or is expected to fluctuate (expected volatility) during a period. Volatility also may be defined as a probability-weighted measure of the dispersion of returns about the mean. The volatility of a share price is the standard deviation of the continuously compounded rates of return on the share over a specified period. That is the same as the standard deviation of the differences in the natural logarithms of the stock prices plus dividends, if any, over the period. The higher the volatility, the more the returns on the shares can be expected to vary—up or down. Volatility is typically expressed in annualized terms.

718-10-25 Recognition

General Note: The Recognition Section provides guidance on the required criteria, timing, and location (within the financial statements) for recording a particular item in the financial statements. Disclosure is not recognition.

General

718-10-25-1 The guidance in this Section is organized as follows:

a. Recognition principle for **share-based payment transactions**

b. Determining the **grant date**

c. Determining whether to classify a financial instrument as a liability or as equity

d. **Market**, **performance**, and **service conditions**

e. [Subparagraph superseded by Accounting Standards Update No. 2012-04].

f. Payroll taxes.

> Recognition Principle for Share-Based Payment Transactions

718-10-25-2 An entity shall recognize the services received in a share-based payment transaction with an **employee** as services are received. Employee services themselves are not recognized before they are received. The entity shall recognize either a corresponding increase in equity or a liability, depending on whether the instruments granted satisfy the equity or liability classification criteria (see paragraphs 718-10-25-6 through 25-19). As the services are consumed, the entity shall recognize the related cost. For example, as services are consumed, the cost usually is recognized in determining net income of that period, for example, as expenses incurred for employee services. In some circumstances, the cost of services may be initially capitalized as part of the cost to acquire or construct another asset, such as inventory, and later recognized in the income statement when that asset is disposed of or consumed. This Topic refers to recognizing compensation cost rather than compensation expense because any compensation cost that is capitalized as part of the cost to acquire or construct an asset would not be recognized as compensation expense in the income statement.

718-10-25-3 The accounting for all share-based payment transactions shall reflect the rights conveyed to the holder of the instruments and the obligations imposed on the issuer of the instruments, regardless of how those transactions are structured. For example, the rights and obligations embodied in a transfer of equity shares to an employee for a note that provides no recourse to other assets of the employee (that is, other than the shares) are substantially the same as those embodied in a grant of equity share options. Thus, that transaction shall be accounted for as a substantive grant of equity share options.

718-10-25-4 Assessment of both the rights and obligations in a share-based payment **award** and any related arrangement and how those rights and obligations affect the **fair value** of an award requires the exercise of judgment in considering the relevant facts and circumstances.

> Determining the Grant Date

718-10-25-5 As a practical accommodation, in determining the grant date of an award subject to this Topic, assuming all other criteria in the grant date definition have been met, a mutual understanding of the key terms and conditions of an award to an individual employee shall be presumed to exist at the date the award is approved in accordance with the relevant corporate governance requirements (that is, by the Board or management with the relevant authority) if both of the following conditions are met:

a. The award is a unilateral grant and, therefore, the recipient does not have the ability to negotiate the key terms and conditions of the award with the employer.

b. The key terms and conditions of the award are expected to be communicated to an individual recipient within a relatively short time period from the date of approval. A relatively short time period is that period in which an entity could reasonably complete all actions necessary to communicate the awards to the recipients in accordance with the entity's customary human resource practices.

For additional guidance see paragraphs 718-10-55-80 through 55-83.

> Determining Whether to Classify a Financial Instrument as a Liability or as Equity

718-10-25-6 This paragraph through paragraph 718-10-25-19 provide guidance for determining whether certain financial instruments awarded in share-based payment transactions are liabilities. In determining whether an instrument not specifically discussed in those paragraphs shall be classified as a liability or as equity, an entity shall apply generally accepted accounting principles (GAAP) applicable to financial instruments issued in transactions not involving share-based payment.

Pending Content:

Transition Date: *(P) December 16, 2016; (N) December 16, 2017* | **Transition Guidance: 718-10-65-7**

This paragraph through paragraph 718-10-25-19A provide guidance for determining whether certain financial instruments awarded in share-based payment transactions are liabilities. In determining whether an instrument not specifically discussed in those paragraphs shall be classified as a liability or as equity, an entity shall apply generally accepted accounting principles (GAAP) applicable to financial instruments issued in transactions not involving share-based payment.

718-10-25-7 Topic 480 excludes from its scope instruments that are accounted for under this Topic. Nevertheless, unless paragraphs 718-10-25-8 through 25-19 require otherwise, an entity shall apply the classification criteria in Section 480-10-25 and paragraphs 480-10-15-3 through 15-4, as they are effective at the reporting date, in determining whether to classify as a liability a **freestanding financial instrument** given to an employee in a share-based payment transaction. Paragraphs 718-10-35-9 through 35-14 provide criteria for determining when instruments subject to this Topic subsequently become subject to Topic 480 or to other applicable GAAP.

718-10-25-8 In determining the classification of an instrument, an entity shall take into account the classification requirements that are effective for that specific entity at the reporting date as established by Topic 480. In addition, a **call option** written on an instrument that is not classified as a liability under those classification requirements (for example, a call option on a mandatorily redeemable share for which liability classification is not required for the specific entity under the requirements effective at the reporting date) also shall be classified as equity so long as those equity classification requirements for the entity continue to be met, unless liability classification is required under the provisions of paragraphs 718-10-25-11 through 25-12.

718-10-25-9 Topic 480 does not apply to outstanding shares embodying a conditional obligation to transfer assets, for example, shares that give the employee the right to require the employer to repurchase them for cash equal to their fair value (puttable shares). A put right may be granted to the employee in a transaction that is related to a share-based compensation arrangement. If exercise of such a put right would require the entity to repurchase shares issued under the share-based compensation arrangement, the shares shall be accounted for as puttable shares. A puttable (or callable) share awarded to an employee as compensation shall be classified as a liability if either of the following conditions is met:

a. The repurchase feature permits the employee to avoid bearing the risks and rewards normally associated with equity share ownership for a reasonable period of time from the date the requisite service is rendered and the share is issued. An employee begins to bear the risks and rewards normally associated with equity share ownership when all the requisite service has been rendered. A repurchase feature that can be exercised only upon the occurrence of a contingent event that is outside the employee’s control (such as an initial public offering) would not meet this condition until it becomes **probable** that the event will occur within the reasonable period of time.

b. It is probable that the employer would prevent the employee from bearing those risks and rewards for a reasonable period of time from the date the share is issued.

For this purpose, a period of six months or more is a reasonable period of time.

718-10-25-10 A puttable (or callable) share that does not meet either of those conditions shall be classified as equity (see paragraph 718-10-55-85).

718-10-25-11 Options or similar instruments on shares shall be classified as liabilities if either of the following conditions is met:

a. The underlying shares are classified as liabilities.

b. The entity can be required under any circumstances to **settle** the option or similar instrument by transferring cash or other assets. A cash settlement feature that can be exercised only upon the occurrence of a contingent event that is outside the employee's control (such as an initial public offering) would not meet this condition until it becomes probable that event will occur.

718-10-25-12 For example, a **Securities and Exchange Commission (SEC) registrant** may grant an option to an employee that, upon exercise, would be settled by issuing a mandatorily redeemable share. Because the mandatorily redeemable share would be classified as a liability under Topic 480, the option also would be classified as a liability.

718-10-25-13 An award may be indexed to a factor in addition to the entity's share price. If that additional factor is not a market, performance, or service condition, the award shall be classified as a liability for purposes of this Topic, and the additional factor shall be reflected in estimating the fair value of the award. Paragraph 718-10-55-65 provides examples of such awards.

718-10-25-14 For this purpose, an award of equity share options granted to an employee of an entity's foreign operation that provides for a fixed exercise price denominated either in the foreign operation's functional currency or in the currency in which the employee's pay is denominated shall not be considered to contain a condition that is not a market, performance, or service condition. Therefore, such an award is not required to be classified as a liability if it otherwise qualifies as equity. For example, equity share options with an exercise price denominated in euros granted to employees of a U.S. entity's foreign operation whose functional currency is the euro are not required to be classified as liabilities if those options otherwise qualify as equity. In addition, such options are not required to be classified as liabilities even if the functional currency of the foreign operation is the U.S. dollar, provided that the employees to whom the options are granted are paid in euros.

718-10-25-14A For purposes of applying paragraph 718-10-25-13, a share-based payment award with an exercise price denominated in the currency of a market in which a substantial portion of the entity's equity securities trades shall not be considered to contain a condition that is not a market, performance, or service condition. Therefore, in accordance with that paragraph, such an award shall not be classified as a liability if it otherwise qualifies for equity classification. For example, a parent entity whose functional currency is the Canadian dollar grants equity share options with an exercise price denominated in U.S. dollars to employees of a Canadian entity with the functional and payroll currency of the Canadian dollar. If a substantial portion of the parent entity's equity securities trades on a U.S. dollar denominated exchange, the options are not precluded from equity classification.

718-10-25-15 The accounting for an award of share-based payment shall reflect the substantive terms of the award and any related arrangement. Generally, the written terms provide the best evidence of the substantive terms of an award. However, an entity's past practice may indicate that the substantive terms of an award differ from its written terms. For example, an entity that grants a **tandem award** under which an employee receives either a stock option or a cash-settled stock appreciation right is obligated to pay cash on demand if the choice is the employee's, and the entity thus incurs a liability to the employee. In contrast, if the choice is the entity's, it can avoid transferring its assets by choosing to settle in stock, and the award qualifies as an equity instrument. However, if an entity that nominally has the choice of settling awards by issuing stock predominately settles in cash or if the entity usually settles in cash whenever an employee asks for cash settlement, the entity is settling a substantive liability rather than repurchasing an equity instrument. In determining whether an entity that has the choice of settling an award by issuing equity shares has a substantive liability, the entity also shall consider whether:

a. It has the ability to deliver the shares. (Federal securities law generally requires that transactions involving offerings of shares under employee **share option** arrangements be registered, unless there is an available exemption. For purposes of this Topic, such requirements do not, by themselves, imply that an entity does not have the ability to deliver shares and thus do not require an award that otherwise qualifies as equity to be classified as a liability.)

b. It is required to pay cash if a contingent event occurs (see paragraphs 718-10-25-11 through 25-12).

718-10-25-16 A provision that permits employees to effect a **broker-assisted cashless exercise** of part or all of an award of share options through a broker does not result in liability classification for instruments that otherwise would be classified as equity if both of the following criteria are satisfied:

a. The cashless exercise requires a valid exercise of the share options.

b. The employee is the legal owner of the shares subject to the option (even though the employee has not paid the exercise price before the sale of the shares subject to the option).

718-10-25-17 A broker that is a **related party** of the entity must sell the shares in the open market within a normal settlement period, which generally is three days, for the award to qualify as equity.

718-10-25-18 Similarly, a provision for either direct or indirect (through a net-settlement feature) repurchase of shares issued upon exercise of options (or the vesting of **nonvested shares**), with any payment due employees withheld to meet the employer's minimum statutory withholding requirements resulting from the exercise, does not, by itself, result in liability classification of instruments that otherwise would be classified as equity. However, if an amount in excess of the minimum statutory requirement is withheld, or may be withheld at the employee's discretion, the entire award shall be classified and accounted for as a liability.

Pending Content:

Transition Date: *(P) December 16, 2016; (N) December 16, 2017* | **Transition Guidance: 718-10-65-7**

Similarly, a provision for either direct or indirect (through a net-settlement feature) repurchase of shares issued upon exercise of options (or the vesting of **nonvested shares**), with any payment due employees withheld to meet the employer's statutory withholding requirements resulting from the exercise, does not, by itself, result in liability classification of instruments that otherwise would be classified as equity. However, if the amount that is witheld, or may be witheld at the employee's discretion, is in excess of the maximum statutory tax rates in the employees' applicable jurisdictions, the entire award shall be classified and accounted for as a liability. That is, to qualify for equity classification, the employer must have a statutory obligation to withhold taxes on the employee's behalf, and the amount withheld cannot exceed the maximum statutory tax rates in the employees' applicable jurisdictions. The maximum statutory tax rates are based on the applicable rates of the relevant tax authorities (for example, federal, state, and local), including the employee's share of payroll or similar taxes, as provided in tax law, regulations, or the authority's administrative practices, not to exceed the highest statutory rate in that jurisdiction, even if that rate exceeds the highest rate that may be applicable to the specific award grantee.

718-10-25-19 Minimum statutory withholding requirements are to be based on the applicable minimum statutory withholding rates required by the relevant tax authority (or authorities, for example, federal, state, and local), including the employee's share of payroll taxes that are applicable to such supplemental taxable income.

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[Paragraph superseded by Accounting Standards Update No. 2016-09]

718-10-25-19A

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Paragraph 230-10-45-15 provides guidance on the classification on the statement of cash flows for cash paid to a tax authority by an employer when withholding shares from an employee's award for tax-withholding purposes.

> Market, Performance, and Service Conditions

718-10-25-20 Accruals of compensation cost for an award with a **performance condition** shall be based on the **probable** outcome of that performance condition—compensation cost shall be accrued if it is probable that the performance condition will be achieved and shall not be accrued if it is not probable that the performance condition will be achieved. If an award has multiple performance conditions (for example, if the number of options or shares an employee earns varies depending on which, if any, of two or more performance conditions is satisfied), compensation cost shall be accrued if it is probable that a performance condition will be satisfied. In making that assessment, it may be necessary to take into account the interrelationship of those performance conditions. Example 2 (see paragraph 718-20-55-35) provides an illustration of how to account for awards with multiple performance conditions.

718-10-25-21 If an award requires satisfaction of one or more market, performance, or service conditions (or any combination thereof), compensation cost shall be recognized if the requisite service is rendered, and no compensation cost shall be recognized if the requisite service is not rendered. Paragraphs 718-10-55-60 through 55-63 provide guidance on applying this provision to awards with market, performance, or service conditions (or any combination thereof).

> Payroll Taxes

718-10-25-22 A liability for employee payroll taxes on employee stock compensation shall be recognized on the date of the event triggering the measurement and payment of the tax to the taxing authority (for a nonqualified option in the United States, generally the exercise date).

718-10-25-23 Payroll taxes, even though directly related to the appreciation on stock options, are operating expenses and shall be reflected as such in the statement of operations.

718-10-30 Initial Measurement

General Note: The Initial Measurement Section provides guidance on the criteria and amounts used to measure a particular item at the date of initial recognition.

General

718-10-30-1 While some of the material in this Section was written in terms of awards classified as equity, it applies equally to awards classified as liabilities.

> Fair-Value-Based

718-10-30-2 A share-based payment transaction with employees shall be measured based on the **fair value** (or in certain situations specified in this Topic, a **calculated value** or **intrinsic value**) of the equity instruments issued.

718-10-30-3 An entity shall account for the compensation cost from **share-based payment transactions** with employees in accordance with the fair-value-based method set forth in this Topic. That is, the cost of services received from employees in exchange for **awards** of share-based compensation generally shall be measured based on the grant-date fair value of the equity instruments issued or on the fair value of the liabilities incurred. The cost of services received by an entity as consideration for equity instruments issued or liabilities incurred in share-based compensation transactions with employees shall be measured based on the fair value of the equity instruments issued or the liabilities **settled**. The portion of the fair value of an instrument attributed to **employee** service is net of any amount that an employee pays (or becomes obligated to pay) for that instrument when it is granted. For example, if an employee pays $5 at the **grant date** for an option with a grant-date fair value of $50, the amount attributed to employee service is $45.

718-10-30-4 However, this Topic provides certain exceptions (see paragraph 718-10-30-21) to that measurement method if it is not possible to reasonably estimate the fair value of an **award** at the grant date. A **nonpublic entity** also may choose to measure its liabilities under **share-based payment arrangements** at intrinsic value (see paragraphs 718-10-30-20 and 718-30-30-2).

> > Terms of the Award Affect Fair Value

718-10-30-5 The **terms of a share-based payment award** and any related arrangement affect its value and, except for certain explicitly excluded features, such as a **reload feature**, shall be reflected in determining the fair value of the equity or liability instruments granted. For example, the fair value of a substantive option structured as the exchange of equity shares for a nonrecourse note will differ depending on whether the employee is required to pay nonrefundable interest on the note.

> Measurement Objective—Fair Value at Grant Date

718-10-30-6 The measurement objective for equity instruments awarded to employees is to estimate the fair value at the grant date of the equity instruments that the entity is obligated to issue when employees have rendered the requisite service and satisfied any other conditions necessary to earn the right to benefit from the instruments (for example, to exercise share options). That estimate is based on the share price and other pertinent factors, such as expected **volatility**, at the grant date.

718-10-30-7 The fair value of an equity **share option** or similar instrument shall be measured based on the observable market price of an option with the same or similar terms and conditions, if one is available (see paragraph 718-10-55-10).

718-10-30-8 Such market prices for equity share options and similar instruments granted to employees are frequently not available; however, they may become so in the future.

718-10-30-9 As such, the fair value of an equity share option or similar instrument shall be estimated using a valuation technique such as an option-pricing model. For this purpose, a similar instrument is one whose fair value differs from its intrinsic value, that is, an instrument that has **time value**. For example, a share appreciation right that requires net settlement in equity shares has time value; an equity share does not. Paragraphs 718-10-55-4 through 55-47 provide additional guidance on estimating the fair value of equity instruments, including the factors to be taken into account in estimating the fair value of equity share options or similar instruments as described in paragraphs 718-10-55-21 through 55-22.

> Factors or Restrictions that Impact the Determination of Fair Value at Grant Date

> > Vesting versus Nontransferability

718-10-30-10 To satisfy the measurement objective in paragraph 718-10-30-6, the restrictions and conditions inherent in equity instruments awarded to employees are treated differently depending on whether they continue in effect after the **requisite service period**. A **restriction** that continues in effect after an entity has issued instruments to employees, such as the inability to transfer vested equity share options to third parties or the inability to sell vested shares for a period of time, is considered in estimating the fair value of the instruments at the grant date. For equity share options and similar instruments, the effect of nontransferability (and nonhedgeability, which has a similar effect) is taken into account by reflecting the effects of employees' expected exercise and postvesting employment termination behavior in estimating fair value (referred to as an option's expected term).

> > Forfeitability

718-10-30-11 A restriction that stems from the forfeitability of instruments to which employees have not yet earned the right, such as the inability either to exercise a nonvested equity share option or to sell **nonvested shares**, is not reflected in estimating the fair value of the related instruments at the grant date. Instead, those restrictions are taken into account by recognizing compensation cost only for awards for which employees render the requisite service.

> > Performance or Service Conditions

718-10-30-12 Awards of share-based employee compensation ordinarily specify a **performance condition** or a **service condition** (or both) that must be satisfied for an employee to earn the right to benefit from the award. No compensation cost is recognized for instruments that employees forfeit because a service condition or a performance condition is not satisfied (that is, instruments for which the requisite service is not rendered). Examples 1 through 2 (see paragraphs 718-20-55-4 through 55-40) and Example 1 (see paragraph 718-30-55-1) provide illustrations of how compensation cost is recognized for awards with service and performance conditions.

718-10-30-13 The fair-value-based method described in paragraphs 718-10-30-6 and 718-10-30-10 through 30-14 uses fair value measurement techniques, and the grant-date share price and other pertinent factors are used in applying those techniques. However, the effects on the grant-date fair value of service and performance conditions that apply only during the requisite service period are reflected based on the outcomes of those conditions. This Topic refers to the required measure as fair value.

> > Market Conditions

718-10-30-14 Some awards contain a **market condition**. The effect of a market condition is reflected in the grant-date fair value of an award. (Valuation techniques have been developed to value path-dependent options as well as other options with complex terms. Awards with market conditions, as defined in this Topic, are path-dependent options.) Compensation cost thus is recognized for an award with a market condition provided that the requisite service is rendered, regardless of when, if ever, the market condition is satisfied.

> > Market, Performance, and Service Conditions that Affect Factors Other than Vesting or Exercisability

718-10-30-15 Market, performance, and service conditions (or any combination thereof) may affect an award's exercise price, contractual term, quantity, conversion ratio, or other factors that are considered in measuring an award's grant-date fair value. A grant-date fair value shall be estimated for each possible outcome of such a performance or service condition, and the final measure of compensation cost shall be based on the amount estimated at the grant date for the condition or outcome that is actually satisfied. Paragraphs 718-10-55-64 through 55-66 provide additional guidance on the effects of market, performance, and service conditions that affect factors other than vesting or exercisability. Examples 2 (see paragraph 718-20-55-35); 3 (see paragraph 718-20-55-41); 4 (see paragraph 718-20-55-47); 5 (see paragraph 718-20-55-51); and 7 (see paragraph 718-20-55-68) provide illustrations of accounting for awards with such conditions.

718-10-30-16 [Paragraph not used]

> > Nonvested or Restricted Shares

718-10-30-17 A nonvested equity share or nonvested equity **share unit** awarded to an employee shall be measured at its fair value as if it were vested and issued on the grant date.

718-10-30-18 Nonvested shares granted to employees usually are referred to as **restricted shares**, but this Topic reserves that term for fully vested and outstanding shares whose sale is contractually or governmentally prohibited for a specified period of time.

718-10-30-19 A restricted share awarded to an employee, that is, a share that will be restricted after the employee has a vested right to it, shall be measured at its fair value, which is the same amount for which a similarly restricted share would be issued to third parties. Example 8 (see paragraph 718-20-55-71) provides an illustration of accounting for an award of nonvested shares.

> Nonpublic Entity — Calculated Value

718-10-30-20 A nonpublic entity may not be able to reasonably estimate the fair value of its equity share options and similar instruments because it is not practicable for it to estimate the expected volatility of its share price. In that situation, the entity shall account for its equity share options and similar instruments based on a value calculated using the historical volatility of an appropriate industry sector index instead of the expected volatility of the entity's share price (the calculated value). Throughout the remainder of this Topic, provisions that apply to accounting for share options and similar instruments at fair value also apply to calculated value. Paragraphs 718-10-55-51 through 55-58 and Example 9 (see paragraph 718-20-55-76) provide additional guidance on applying the calculated value method to equity share options and similar instruments granted by a nonpublic entity.

> Nonpublic Entity—Practical Expedient for Expected Term

718-10-30-20A

Pending Content:

Transition Date: *(P) December 16, 2016; (N) December 16, 2017* | **Transition Guidance: 718-10-65-9**

For an award that meets the conditions in paragraph 718-10-30-20B, a nonpublic entity may make an entity-wide accounting policy election to estimate the expected term using the following practical expedient:

a. If vesting is only dependent upon a service condition, a nonpublic entity shall estimate the expected term as the midpoint between the requisite service period and the contractual term of the award.

b. If vesting is dependent upon satisfying a performance condition, a nonpublic entity first would determine whether the performance condition is **probable** of being achieved.

1. If the nonpublic entity concludes that the performance condition is probable of being achieved, the nonpublic entity shall estimate the expected term as the midpoint between the requisite service period (a nonpublic entity shall consider the guidance in paragraphs 718-10-55-69 through 55-79 when determining the requisite service period of the award) and the contractual term.

2. If the nonpublic entity concludes that the performance condition is not probable of being achieved, the nonpublic entity shall estimate the expected term as either:

   i. The contractual term if the service period is implied (that is, the requisite service period is not explicitly stated but inferred based on the achievement of the performance condition at some undetermined point in the future)

   ii. The midpoint between the requisite service period and the contractual term if the requisite service period is stated explicitly.

Paragraph 718-10-55-50A provides implementation guidance on the practical expedient.

718-10-30-20B

Pending Content:

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A nonpublic entity that elects to apply the practical expedient in paragraph 718-10-30-20A shall apply the practical expedient to a share option or similar award that has all of the following characteristics:

a. The share option or similar award is granted at the money.

b. The employee has only a limited time to exercise the award (typically 30–90 days) if the employee terminates service after vesting.

c. The employee can only exercise the award. The employee cannot sell or hedge the award.

d. The award does not include a market condition.

> Difficulty of Estimation

718-10-30-21 It should be possible to reasonably estimate the fair value of most equity share options and other equity instruments at the date they are granted. Section 718-10-55 illustrates techniques for estimating the fair values of several instruments with complicated features. However, in rare circumstances, it may not be possible to reasonably estimate the fair value of an equity share option or other equity instrument at the grant date because of the complexity of its terms.

> > Intrinsic Value Method

718-10-30-22 An equity instrument for which it is not possible to reasonably estimate fair value at the grant date shall be accounted for based on its intrinsic value (see paragraph 718-20-35-1 for measurement after issue date).

> Reload and Contingent Features

718-10-30-23 The fair value of each award of equity instruments, including an award of options with a reload feature (reload options), shall be measured separately based on its terms and the share price and other pertinent factors at the grant date. The effect of a reload feature in the terms of an award shall not be included in estimating the grant-date fair value of the award. Rather, a subsequent grant of reload options pursuant to that provision shall be accounted for as a separate award when the reload options are granted.

718-10-30-24 A contingent feature of an award that might cause an employee to return to the entity either equity instruments earned or realized gains from the sale of equity instruments earned for consideration that is less than fair value on the date of transfer (including no consideration), such as a clawback feature (see paragraph 718-10-55-8), shall not be reflected in estimating the grant-date fair value of an equity instrument.

> Requisite Service Period

718-10-30-25 An entity shall make its initial best estimate of the requisite service period at the grant date (or at the **service inception date**, if that date precedes the grant date) and shall base accruals of compensation cost on that period.

718-10-30-26 The initial best estimate and any subsequent adjustment to that estimate of the requisite service period for an award with a combination of market, performance, or service conditions shall be based on an analysis of all of the following:

a. All vesting and exercisability conditions

b. All explicit, implicit, and derived service periods

c. The probability that performance or service conditions will be satisfied.

> Market, Performance, and Service Conditions

718-10-30-27 Performance or service conditions that affect vesting are not reflected in estimating the fair value of an award at the grant date because those conditions are restrictions that stem from the forfeitability of instruments to which employees have not yet earned the right. However, the effect of a market condition is reflected in estimating the fair value of an award at the grant date (see paragraph 718-10-30-14). For purposes of this Topic, a market condition is not considered to be a vesting condition, and an award is not deemed to be forfeited solely because a market condition is not satisfied.

718-10-30-28

Pending Content:

Transition Date: *(P) December 16, 2015; (N) December 16, 2015* | **Transition Guidance: 718-10-65-3**

In some cases, the terms of an award may provide that a performance target that affects vesting could be achieved after an employee completes the requisite service period. That is, the employee would be eligible to vest in the award regardless of whether the employee is rendering service on the date the performance target is achieved. A performance target that affects vesting and that could be achieved after an employee's requisite service period shall be accounted for as a performance condition. As such, the performance target shall not be reflected in estimating the fair value of the award at the grant date. Compensation cost shall be recognized in the period in which it becomes probable that the performance target will be achieved and should represent the compensation cost attributable to the period(s) for which the requisite service already has been rendered. If the performance target becomes probable of being achieved before the end of the requisite service period, the remaining unrecognized compensation cost for which requisite service has not yet been rendered shall be recognized prospectively over the remaining requisite service period. The total amount of compensation cost recognized during and after the requisite service period shall reflect the number of awards that are expected to **vest** and shall be adjusted to reflect those awards that ultimately vest. The requisite service period ends when the employee can cease rendering service and still be eligible to vest in the award if the performance target is achieved. As indicated in the definition of vest, the stated vesting period (which includes the period in which the performance target could be achieved) may differ from the requisite service period.

Pending Content:

Transition Date: *(P) December 16, 2016; (N) December 16, 2017* | **Transition Guidance: 718-10-65-6**

In some cases, the terms of an award may provide that a performance target that affects vesting could be achieved after an employee completes the requisite service period. That is, the employee would be eligible to vest in the award regardless of whether the employee is rendering service on the date the performance target is achieved. A performance target that affects vesting and that could be achieved after an employee's requisite service period shall be accounted for as a performance condition. As such, the performance target shall not be reflected in estimating the fair value of the award at the grant date. Compensation cost shall be recognized in the period in which it becomes probable that the performance target will be achieved and should represent the compensation cost attributable to the period(s) for which the requisite service already has been rendered. If the performance target becomes probable of being achieved before the end of the requisite service period, the remaining unrecognized compensation cost for which requisite service has not yet been rendered shall be recognized prospectively over the remaining requisite service period. The total amount of compensation cost recognized during and after the requisite service period shall reflect the number of awards that are expected to **vest** based on the performance target and shall be adjusted to reflect those awards that ultimately vest. An entity that has an accounting policy to account for forfeitures when they occur in accordance with paragraph 718-10-35-3 shall reverse compensation cost previously recognized, in the period the award is forfeited, for an award that is forfeited before completion of the requisite service period. The requisite service period ends when the employee can cease rendering service and still be eligible to vest in the award if the performance target is achieved. As indicated in the definition of vest, the stated vesting period (which includes the period in which the performance target could be achieved) may differ from the requisite service period.

718-10-35 Subsequent Measurement

General Note: The Subsequent Measurement Section provides guidance on an entity's subsequent measurement and subsequent recognition of an item. Situations that may result in subsequent changes to carrying amount include impairment, credit losses, fair value adjustments, depreciation and amortization, and so forth.

General

718-10-35-1 This Subtopic is interrelated with Subtopics 718-20 and 718-30. Material that equally applies to both liabilities and equity is generally found in this Subtopic. However, material may have been placed in one of the other Subtopics.

> Recognition of Compensation Costs over the Requisite Service Period

718-10-35-2 The compensation cost for an **award** of share-based **employee** compensation classified as equity shall be recognized over the **requisite service period**, with a corresponding credit to equity (generally, paid-in capital). The requisite service period is the period during which an employee is required to provide service in exchange for an award, which often is the vesting period. The requisite service period is estimated based on an analysis of the **terms of the share-based payment award**.

718-10-35-3 The total amount of compensation cost recognized at the end of the requisite service period for an award of share-based compensation shall be based on the number of instruments for which the requisite service has been rendered (that is, for which the requisite service period has been completed). An entity shall base initial accruals of compensation cost on the estimated number of instruments for which the requisite service is expected to be rendered. That estimate shall be revised if subsequent information indicates that the actual number of instruments is likely to differ from previous estimates. The cumulative effect on current and prior periods of a change in the estimated number of instruments for which the requisite service is expected to be or has been rendered shall be recognized in compensation cost in the period of the change. Previously recognized compensation cost shall not be reversed if an employee **share option** (or **share unit**) for which the requisite service has been rendered expires unexercised (or unconverted).

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Transition Date: *(P) December 16, 2016; (N) December 16, 2017* | **Transition Guidance: 718-10-65-6**

The total amount of compensation cost recognized at the end of the requisite service period for an award of share-based compensation shall be based on the number of instruments for which the requisite service has been rendered (that is, for which the requisite service period has been completed). Previously recognized compensation cost shall not be reversed if an employee **share option** (or **share unit**) for which the requisite service has been rendered expires unexercised (or unconverted). To determine the amount of compensation cost to be recognized in each period, an entity shall make an entity-wide accounting policy election for all share-based payment awards to do either of the following:

a. Estimate the number of awards for which the requisite service will not be rendered (that is, estimate the number of forfeitures expected to occur). The entity shall base initial accruals of compensation cost on the estimated number of instruments for which the requisite service is expected to be rendered. The entity shall revise that estimate if subsequent information indicates that the actual number of instruments is likely to differ from previous estimates. The cumulative effect on current and prior periods of a change in the estimated number of instruments for which the requisite service is expected to be or has been rendered shall be recognized in compensation cost in the period of the change.

b. Recognize the effect of awards for which the requisite service is not rendered when the award is forfeited (that is, recognize the effect of forfeitures in compensation cost when they occur). Previously recognized compensation cost for an award shall be reversed in the period that the award is forfeited.

718-10-35-4 An entity shall reverse previously recognized compensation cost for an award with a **market condition** only if the requisite service is not rendered.

> Estimating the Requisite Service Period

718-10-35-5 The requisite service period may be explicit or it may be implicit, being inferred from an analysis of other terms in the award, including other explicit service or performance conditions. The requisite service period for an award that contains a market condition can be derived from certain valuation techniques that may be used to estimate grant-date **fair value** (see paragraph 718-10-55-71). An award may have one or more explicit, implicit, or derived service periods; however, an award may have only one requisite service period for accounting purposes unless it is accounted for as in-substance multiple awards. An award with a graded vesting schedule that is accounted for as in-substance multiple awards is an example of an award that has more than one requisite service period (see paragraph 718-10-35-8). Paragraphs 718-10-55-69 through 55-79 and 718-10-55-93 through 55-106 provide guidance on estimating the requisite service period and provide examples of how that period shall be estimated if an award's terms include more than one **explicit**, **implicit**, or **derived service period**.

718-10-35-6 The **service inception date** is the beginning of the requisite service period. If the service inception date precedes the **grant date** (see paragraph 718-10-55-108), accrual of compensation cost for periods before the grant date shall be based on the fair value of the award at the reporting date. In the period in which the grant date occurs, cumulative compensation cost shall be adjusted to reflect the cumulative effect of measuring compensation cost based on fair value at the grant date rather than the fair value previously used at the service inception date (or any subsequent reporting date). Example 6 (see paragraph 718-10-55-107) illustrates the concept of service inception date and how it is to be applied.

718-10-35-7 An entity shall adjust that initial best estimate in light of changes in facts and circumstances. Whether and how the initial best estimate of the requisite service period is adjusted depends on both the nature of the conditions identified in paragraph 718-10-30-26 and the manner in which they are combined, for example, whether an award vests or becomes exercisable when either a market or a **performance condition** is satisfied or whether both conditions must be satisfied. Paragraphs 718-10-55-69 through 55-79 provide guidance on adjusting the initial estimate of the requisite service period.

> Graded Vesting Awards

718-10-35-8 An entity shall make a policy decision about whether to recognize compensation cost for an award with only service conditions that has a graded vesting schedule in either of the following ways:

a. On a straight-line basis over the requisite service period for each separately vesting portion of the award as if the award was, in-substance, multiple awards

b. On a straight-line basis over the requisite service period for the entire award (that is, over the requisite service period of the last separately vesting portion of the award).

However, the amount of compensation cost recognized at any date must at least equal the portion of the grant-date value of the award that is vested at that date. Example 1, Case B (see paragraph 718-20-55-25) provides an illustration of the accounting for an award with a graded vesting schedule.

> Awards May Become Subject to Other Guidance

718-10-35-9 Paragraphs 718-10-35-10 through 35-14 are intended to apply to those instruments issued in **share-based payment transactions** with employees accounted for under this Topic, and to instruments exchanged in a business combination for share-based payment awards of the acquired business that were originally granted to employees of the acquired business and are outstanding as of the date of the business combination. Instruments issued, in whole or in part, as consideration for goods or services other than employee service shall not be considered to have been issued in exchange for employee service when applying the guidance in those paragraphs, irrespective of the employment status of the recipient of the award on the grant date.

718-10-35-10 A **freestanding financial instrument** issued to an employee in exchange for past or future employee services that is subject to initial recognition and measurement guidance within this Topic shall continue to be subject to the recognition and measurement provisions of this Topic throughout the life of the instrument, unless its terms are modified when the holder is no longer an employee. Only for purposes of this paragraph, a **modification** does not include a change to the terms of an award if that change is made solely to reflect an **equity restructuring** provided that both of the following conditions are met:

a. There is no increase in fair value of the award (or the ratio of **intrinsic value** to the exercise price of the award is preserved, that is, the holder is made whole) or the antidilution provision is not added to the terms of the award in contemplation of an equity restructuring.

b. All holders of the same class of equity instruments (for example, stock options) are treated in the same manner.

718-10-35-11 Other modifications of that instrument that take place when the holder is no longer an employee shall be subject to the modification guidance in paragraph 718-10-35-14. Following modification, recognition and measurement of the instrument should be determined through reference to other applicable generally accepted accounting principles (GAAP).

718-10-35-12 Once the classification of an instrument is determined, the recognition and measurement provisions of this Topic shall be applied until the instrument ceases to be subject to the requirements discussed in paragraph 718-10-35-10. Topic 480 or other applicable GAAP, such as Topic 815, applies to a freestanding financial instrument that was issued under a share-based payment arrangement but that is no longer subject to this Topic. This guidance is not intended to suggest that all freestanding financial instruments shall be accounted for as liabilities pursuant to Topic 480, but rather that freestanding financial instruments issued in share-based payment transactions may become subject to that Topic or other applicable GAAP depending on their substantive characteristics and when certain criteria are met.

718-10-35-13 [Paragraph superseded by Accounting Standards Update No. 2016-09]

718-10-35-14 An entity may modify (including cancel and replace) or **settle** a fully vested, freestanding financial instrument after it becomes subject to Topic 480 or other applicable GAAP. Such a modification or settlement shall be accounted for under the provisions of this Topic unless it applies equally to all financial instruments of the same class regardless of whether the holder is (or was) an employee (or an employee's beneficiary). Following the modification, the instrument continues to be accounted for under that Topic or other applicable GAAP. A modification or settlement of a class of financial instrument that is designed exclusively for and held only by current or former employees (or their beneficiaries) may stem from the employment relationship depending on the terms of the modification or settlement. Thus, such a modification or settlement may be subject to the requirements of this Topic. See paragraph 718-10-35-10 for a discussion of changes to awards made solely to reflect an equity restructuring.

> Change in Classification Due to Change in Probable Settlement Outcome

718-10-35-15 An option or similar instrument that is classified as equity, but subsequently becomes a liability because the contingent cash settlement event is probable of occurring, shall be accounted for similar to a modification from an equity to liability award. That is, on the date the contingent event becomes probable of occurring (and therefore the award must be recognized as a liability), the entity recognizes a share-based liability equal to the portion of the award attributed to past service (which reflects any provision for acceleration of vesting) multiplied by the award's fair value on that date. To the extent the liability equals or is less than the amount previously recognized in equity, the offsetting debit is a charge to equity. To the extent that the liability exceeds the amount previously recognized in equity, the excess is recognized as compensation cost. The total recognized compensation cost for an award with a contingent cash settlement feature shall at least equal the fair value of the award at the grant date. The guidance in this paragraph is applicable only for options or similar instruments issued as part of employee compensation arrangements. That is, the guidance included in this paragraph is not applicable, by analogy or otherwise, to instruments outside employee **share-based payment arrangements**.

718-10-45 Other Presentation Matters

General Note: The Other Presentation Matters Section provides guidance on other presentation matters not addressed in the Recognition, Initial Measurement, Subsequent Measurement, and Derecognition Sections. Other presentation matters may include items such as current or long-term balance sheet classification, cash flow presentation, earnings per share matters, and so forth. The FASB Codification also contains Presentation Topics, which provide guidance for general presentation and display items. See those Topics for general guidance.

General

> Earnings per Share

718-10-45-1 Topic 260 requires that **employee** equity share options, **nonvested shares**, and similar equity instruments granted to employees be treated as potential common shares in computing diluted earnings per share (EPS). Diluted EPS shall be based on the actual number of options or shares granted and not yet forfeited, unless doing so would be antidilutive. If **vesting** in or the ability to exercise (or retain) an **award** is contingent on a performance or **market condition**, such as the level of future earnings, the shares or share options shall be treated as contingently issuable shares in accordance with paragraphs 260-10-45-48 through 45-57. If equity share options or other equity instruments are outstanding for only part of a period, the shares issuable shall be weighted to reflect the portion of the period during which the equity instruments are outstanding.

Pending Content:

Transition Date: *(P) December 16, 2016; (N) December 16, 2017* | **Transition Guidance: 718-10-65-6**

Topic 260 requires that **employee** equity share options, **nonvested shares**, and similar equity instruments granted to employees be treated as potential common shares in computing diluted earnings per share (EPS). Diluted EPS shall be based on the actual number of options or shares granted and not yet forfeited regardless of the entity's accounting policy for forfeitures in accordance with paragraph 718-10-35-3, unless doing so would be antidilutive. If **vesting** in or the ability to exercise (or retain) an **award** is contingent on a performance or **market condition**, such as the level of future earnings, the shares or share options shall be treated as contingently issuable shares in accordance with paragraphs 260-10-45-48 through 45-57. If equity share options or other equity instruments are outstanding for only part of a period, the shares issuable shall be weighted to reflect the portion of the period during which the equity instruments are outstanding.

718-10-45-2 Paragraphs 260-10-45-29 through 45-34 and Example 8 (see paragraphs 260-10-55-68) provide guidance on applying the treasury stock method for equity instruments granted in **share-based payment transactions** in determining diluted EPS.

718-10-50 Disclosure

General Note: The Disclosure Section provides guidance regarding the disclosure in the notes to financial statements. In some cases, disclosure may relate to disclosure on the face of the financial statements.

General

718-10-50-1 An entity with one or more **share-based payment arrangements** shall disclose information that enables users of the financial statements to understand all of the following:

a. The nature and terms of such arrangements that existed during the period and the potential effects of those arrangements on shareholders

b. The effect of compensation cost arising from share-based payment arrangements on the income statement

c. The method of estimating the **fair value** of the goods or services received, or the fair value of the equity instruments granted (or offered to grant), during the period

d. The cash flow effects resulting from share-based payment arrangements.

This disclosure is not required for interim reporting. For interim reporting see Topic 270. See Example 9 (paragraph 718-10-55-134 through 55-137) for an illustration of this guidance.

718-10-50-2 The following list indicates the minimum information needed to achieve the objectives in the preceding paragraph and illustrates how the disclosure requirements might be satisfied. In some circumstances, an entity may need to disclose information beyond the following to achieve the disclosure objectives:

a. A description of the share-based payment arrangement(s), including the general terms of awards under the arrangement(s), such as:

   1. The **requisite service period(s)** and any other substantive conditions (including those related to vesting)

   2. The maximum contractual term of equity (or liability) **share options** or similar instruments

   3. The number of shares authorized for awards of equity share options or other equity instruments.

b. The method it uses for measuring compensation cost from share-based payment arrangements with **employees**.

c. For the most recent year for which an income statement is provided, both of the following:

   1. The number and weighted-average exercise prices (or conversion ratios) for each of the following groups of share options (or **share units**):

      i. Those outstanding at the beginning of the year

      ii. Those outstanding at the end of the year

      iii. Those exercisable or convertible at the end of the year

iv. Those that during the year were:

01. Granted

02. Exercised or converted

03. Forfeited

04. Expired.

2. The number and weighted-average **grant-date** fair value (or **calculated value** for a **nonpublic entity** that uses that method or **intrinsic value** for awards measured pursuant to paragraph 718-10-30-21) of equity instruments not specified in (c)(1), for all of the following groups of equity instruments:

i. Those nonvested at the beginning of the year

ii. Those nonvested at the end of the year

iii. Those that during the year were:

01. Granted

02. Vested

03. Forfeited.

d. For each year for which an income statement is provided, both of the following:

1. The weighted-average grant-date fair value (or calculated value for a nonpublic entity that uses that method or intrinsic value for awards measured at that value pursuant to paragraphs 718-10-30-21 through 30-22) of equity options or other equity instruments granted during the year

2. The total intrinsic value of options exercised (or share units converted), share-based liabilities paid, and the total fair value of shares vested during the year.

e. For fully vested share options (or share units) and share options expected to **vest** at the date of the latest statement of financial position, both of the following:

1. The number, weighted-average exercise price (or conversion ratio), aggregate intrinsic value (except for nonpublic entities), and weighted-average remaining contractual term of options (or share units) outstanding

2. The number, weighted-average exercise price (or conversion ratio), aggregate intrinsic value (except for nonpublic entities), and weighted-average remaining contractual term of options (or share units) currently exercisable (or convertible).

f. For each year for which an income statement is presented, both of the following (An entity that uses the intrinsic value method pursuant to paragraphs 718-10-30-21 through 30-22 is not required to disclose the following information for awards accounted for under that method):

1. A description of the method used during the year to estimate the fair value (or calculated value) of awards under share-based payment arrangements

2. A description of the significant assumptions used during the year to estimate the fair value (or calculated value) of share-based compensation awards, including (if applicable):

i. Expected term of share options and similar instruments, including a discussion of the method used to incorporate the contractual term of the instruments and employees' expected exercise and postvesting employment termination behavior into the fair value (or calculated value) of the instrument.

ii. Expected **volatility** of the entity's shares and the method used to estimate it. An entity that uses a method that employs different volatilities during the contractual term shall disclose the range of expected volatilities used and the weighted-average expected volatility. A nonpublic entity that uses the calculated value method shall disclose the reasons why it is not practicable for it to estimate the expected volatility of its share price, the appropriate industry sector index that it has selected, the reasons for selecting that particular index, and how it has calculated historical volatility using that index.

iii. Expected dividends. An entity that uses a method that employs different dividend rates during the contractual term shall disclose the range of expected dividends used and the weighted-average expected dividends.

iv. Risk-free rate(s). An entity that uses a method that employs different risk-free rates shall disclose the range of risk-free rates used.

v. Discount for post-vesting restrictions and the method for estimating it.

g. An entity that grants equity or liability instruments under multiple share-based payment arrangements with employees shall provide the information specified in paragraph (a) through (f) separately for different types of awards to the extent that the differences in the characteristics of the awards make separate disclosure important to an understanding of the entity's use of share-based compensation. For example, separate disclosure of weighted-average exercise prices (or conversion ratios) at the end of the year for options (or share units) with a fixed exercise price (or conversion ratio) and those with an indexed exercise price (or conversion ratio) could be important. It also could be important to segregate the number of options (or share units) not yet exercisable into those that will become exercisable (or convertible) based solely on fulfilling a **service condition** and those for which a **performance condition** must be met for the options (share units) to become exercisable (convertible). It could be equally important to provide separate disclosures for awards that are classified as equity and those classified as liabilities. In addition, an entity that has multiple share-based payment arrangements with employees shall disclose information separately for different types of awards under those arrangements to the extent that differences in the characteristics of the awards make separate disclosure important to an understanding of the entity's use of share-based compensation.

h. For each year for which an income statement is presented, both of the following:

1. Total compensation cost for share-based payment arrangements

i. Recognized in income as well as the total recognized tax benefit related thereto

ii. Capitalized as part of the cost of an asset.

2. A description of significant **modifications**, including:

i. The terms of the modifications

ii. The number of employees affected

iii. The total incremental compensation cost resulting from the modifications.

i. As of the latest balance sheet date presented, the total compensation cost related to nonvested awards not yet recognized and the weighted-average period over which it is expected to be recognized

j. If not separately disclosed elsewhere, the amount of cash received from exercise of share options and similar instruments granted under share-based payment arrangements and the tax benefit realized from stock options exercised during the annual period

k. If not separately disclosed elsewhere, the amount of cash used to **settle** equity instruments granted under share-based payment arrangements

l. A description of the entity's policy, if any, for issuing shares upon share option exercise (or share unit conversion), including the source of those shares (that is, new shares or treasury shares). If as a result of its policy, an entity expects to repurchase shares in the following annual period, the entity shall disclose an estimate of the amount (or a range, if more appropriate) of shares to be repurchased during that period.

Pending Content:

Transition Date: *(P) December 16, 2016; (N) December 16, 2017* | **Transition Guidance:** 718-10-65-6

The following list indicates the minimum information needed to achieve the objectives in the preceding paragraph and illustrates how the disclosure requirements might be satisfied. In some circumstances, an entity may need to disclose information beyond the following to achieve the disclosure objectives:

a. A description of the share-based payment arrangement(s), including the general terms of awards under the arrangement(s), such as:

1. The **requisite service period(s)** and any other substantive conditions (including those related to vesting)

2. The maximum contractual term of equity (or liability) **share options** or similar instruments

3. The number of shares authorized for awards of equity share options or other equity instruments.

b. The method it uses for measuring compensation cost from share-based payment arrangements with **employees**.

c. For the most recent year for which an income statement is provided, both of the following:

1. The number and weighted-average exercise prices (or conversion ratios) for each of the following groups of share options (or **share units**):

i. Those outstanding at the beginning of the year

ii. Those outstanding at the end of the year

iii. Those exercisable or convertible at the end of the year

iv. Those that during the year were:

01. Granted

02. Exercised or converted

03. Forfeited

04. Expired.

2. The number and weighted-average **grant-date** fair value (or **calculated value** for a **nonpublic entity** that uses that method or **intrinsic value** for awards measured pursuant to paragraph 718-10-30-21) of equity instruments not specified in (c)(1), for all of the following groups of equity instruments:

i. Those nonvested at the beginning of the year

ii. Those nonvested at the end of the year

iii. Those that during the year were:

01. Granted

02. Vested

03. Forfeited.

d. For each year for which an income statement is provided, both of the following:

1. The weighted-average grant-date fair value (or calculated value for a nonpublic entity that uses that method or intrinsic value for awards measured at that value pursuant to paragraphs 718-10-30-21 through 30-22) of equity options or other equity instruments granted during the year

2. The total intrinsic value of options exercised (or share units converted), share-based liabilities paid, and the total fair value of shares vested during the year.

e. For fully vested share options (or share units) and share options expected to **vest** (or unvested share options for which the requisite service period has not been rendered but that are expected to vest based on the achievement of a performance condition, if an entity accounts for forfeitures when they occur in accordance with paragraph 718-10-35-3) at the date of the latest statement of financial position, both of the following:

1. The number, weighted-average exercise price (or conversion ratio), aggregate intrinsic value (except for nonpublic entities), and weighted-average remaining contractual term of options (or share units) outstanding

2. The number, weighted-average exercise price (or conversion ratio), aggregate intrinsic value (except for nonpublic entities), and weighted-average remaining contractual term of options (or share units) currently exercisable (or convertible).

f. For each year for which an income statement is presented, both of the following (An entity that uses the intrinsic value method pursuant to paragraphs 718-10-30-21 through 30-22 is not required to disclose the following information for awards accounted for under that method):

1. A description of the method used during the year to estimate the fair value (or calculated value) of awards under share-based payment arrangements

2. A description of the significant assumptions used during the year to estimate the fair value (or calculated value) of share-based compensation awards, including (if applicable):

i. Expected term of share options and similar instruments, including a discussion of the method used to incorporate the contractual term of the instruments and employees' expected exercise and postvesting employment termination behavior into the fair value (or calculated value) of the instrument.

ii. Expected **volatility** of the entity's shares and the method used to estimate it. An entity that uses a method that employs different volatilities during the contractual term shall disclose the range of expected volatilities used and the weighted-average expected volatility. A nonpublic entity that uses the calculated value method shall disclose the reasons why it is not practicable for it to estimate the expected volatility of its share price, the appropriate industry sector index that it has selected, the reasons for selecting that particular index, and how it has calculated historical volatility using that index.

iii. Expected dividends. An entity that uses a method that employs different dividend rates during the contractual term shall disclose the range of expected dividends used and the weighted-average expected dividends.

iv. Risk-free rate(s). An entity that uses a method that employs different risk-free rates shall disclose the range of risk-free rates used.

v. Discount for post-vesting restrictions and the method for estimating it.

g. An entity that grants equity or liability instruments under multiple share-based payment arrangements with employees shall provide the information specified in paragraph (a) through (f) separately for different types of awards to the extent that the differences in the characteristics of the awards make separate disclosure important to an understanding of the entity's use of share-based compensation. For example, separate disclosure of weighted-average exercise prices (or conversion ratios) at the end of the year for options (or share units) with a fixed exercise price (or conversion ratio) and those with an indexed exercise price (or conversion ratio) could be important. It also could be important to segregate the number of options (or share units) not yet exercisable into those that will become exercisable (or convertible) based solely on fulfilling a **service condition** and those for which a **performance condition** must be met for the options (share units) to become exercisable (convertible). It could be equally important to provide separate disclosures for awards that are classified as equity and those classified as liabilities. In addition, an entity that has multiple share-based payment arrangements with employees shall disclose information separately for different types of awards under those arrangements to the extent that differences in the characteristics of the awards make separate disclosure important to an understanding of the entity's use of share-based compensation.

h. For each year for which an income statement is presented, both of the following:

1. Total compensation cost for share-based payment arrangements

i. Recognized in income as well as the total recognized tax benefit related thereto

ii. Capitalized as part of the cost of an asset.

2. A description of significant **modifications**, including:

i. The terms of the modifications

ii. The number of employees affected

iii. The total incremental compensation cost resulting from the modifications.

i. As of the latest balance sheet date presented, the total compensation cost related to nonvested awards not yet recognized and the weighted-average period over which it is expected to be recognized

j. [Subparagraph superseded by Accounting Standards Update No. 2016-09]

k. If not separately disclosed elsewhere, the amount of cash used to **settle** equity instruments granted under share-based payment arrangements

l. A description of the entity's policy, if any, for issuing shares upon share option exercise (or share unit conversion), including the source of those shares (that is, new shares or treasury shares). If as a result of its policy, an entity expects to repurchase shares in the following annual period, the entity shall disclose an estimate of the amount (or a range, if more appropriate) of shares to be repurchased during that period.

m. If not separately disclosed elsewhere, the policy for estimating expected forfeitures or recognizing forfeitures as they occur.

718-10-50-2A

Pending Content:

Transition Date: *(P) December 16, 2016; (N) December 16, 2017* | **Transition Guidance: 718-10-65-4**

Another item of minimum information needed to achieve the objectives in paragraph 718-10-50-1 is the following:

a. If not separately disclosed elsewhere, the amount of cash received from exercise of share options and similar instruments granted under share-based payment arrangements and the tax benefit from stock options exercised during the annual period

718-10-50-3 [Paragraph not used]

718-10-50-4 In addition to the information required by this Topic, an entity may disclose supplemental information that it believes would be useful to investors and creditors, such as a range of values calculated on the basis of different assumptions, provided that the supplemental information is reasonable and does not lessen the prominence and credibility of the information required by this Topic. The alternative assumptions shall be described to enable users of the financial statements to understand the basis for the supplemental information.

718-10-55 Implementation Guidance and Illustrations

General Note: The Implementation Guidance and Illustrations Section contains implementation guidance and illustrations that are an integral part of the Subtopic. The implementation guidance and illustrations do not address all possible variations. Users must consider carefully the actual facts and circumstances in relation to the requirements of the Subtopic.

General

> Implementation Guidance

718-10-55-1 This Subtopic and Subtopics 718-20 and 718-30 are interrelated and the required guidance may be located in either this Subtopic or one of the other Subtopics. In general, material that relates to both equity and liability instruments is included in this Subtopic, while material more specifically related to either equity or liability instruments is included in their respective Subtopics.

718-10-55-2 Implementation guidance is provided on the following matters:

a. **Fair value** measurement objectives and application
b. Fair-value-based instruments in a share-based transaction
c. Valuation techniques
d. Selecting assumptions for use in an option pricing model
    1. Consistent use of valuation techniques and methods for selecting assumptions
    2. Selecting or estimating the risk-free rate for the expected term
    3. Selecting or estimating the expected term
    4. Selecting or estimating the expected **volatility**
    5. Selecting or estimating expected dividends
    6. Dividend protected awards
    7. Selecting or considering credit risk
    8. Contingency features that affect the option pricing model
    9. Consider dilution.
e. **Calculated value** for certain nonpublic entities
f. **Market**, **performance**, and **service conditions**
    1. Market, performance, and service conditions that affect vesting and exercisability
    2. Market, performance, and service conditions that affect factors other than vesting and exercisability
    3. Estimating the **requisite service period**
    4. Explicit, implicit, and derived requisite service periods.
g. Determination of **grant date**
h. **Service inception date** and grant date
i. **Equity restructuring**
j. Classification of certain awards with repurchase features
k. Employee of a physician practice.

Pending Content:

Transition Date: *(P) December 16, 2016; (N) December 16, 2017* | **Transition Guidance: 718-10-65-9**

Implementation guidance is provided on the following matters:

a. **Fair value** measurement objectives and application
b. Fair-value-based instruments in a share-based transaction
c. Valuation techniques
d. Selecting assumptions for use in an option pricing model
    1. Consistent use of valuation techniques and methods for selecting assumptions
    2. Selecting or estimating the risk-free rate for the expected term
    3. Selecting or estimating the expected term
    4. Selecting or estimating the expected **volatility**

5. Selecting or estimating expected dividends
6. Dividend protected awards
7. Selecting or considering credit risk
8. Contingency features that affect the option pricing model
9. Consider dilution.

dd. Nonpublic entity—practical expedient for expected term

e. **Calculated value** for certain nonpublic entities

f. **Market**, **performance**, and **service conditions**

1. Market, performance, and service conditions that affect vesting and exercisability
2. Market, performance, and service conditions that affect factors other than vesting and exercisability
3. Estimating the **requisite service period**
4. Explicit, implicit, and derived requisite service periods.

g. Determination of **grant date**

h. **Service inception date** and grant date

i. **Equity restructuring**

j. Classification of certain awards with repurchase features

k. Employee of a physician practice.

718-10-55-3 In this Section fair value also applies to nonpublic entities that use the calculated value method pursuant to paragraph 718-10-30-20.

> > Fair Value Measurement Objectives and Application

718-10-55-4 The measurement objective for equity instruments awarded to employees is to estimate the grant-date fair value of the equity instruments that the entity is obligated to issue when employees have rendered the requisite service and satisfied any other conditions necessary to earn the right to benefit from the instruments. That estimate is based on the share price and other pertinent factors (including those enumerated in paragraphs 718-10-55-21 through 55-22, if applicable) at the grant date and is not remeasured in subsequent periods under the fair-value-based method.

718-10-55-5 A **restriction** that continues in effect after the entity has issued instruments to employees, such as the inability to transfer vested equity share options to third parties or the inability to sell vested shares for a period of time, is considered in estimating the fair value of the instruments at the grant date. For instance, if shares are traded in an active market, post-vesting restrictions may have little, if any, effect on the amount at which the shares being valued would be exchanged. For share options and similar instruments, the effect of nontransferability (and nonhedgeability, which has a similar effect) is taken into account by reflecting the effects of employees' expected exercise and post-vesting employment termination behavior in estimating fair value (referred to as an option's expected term).

718-10-55-6 In contrast, a restriction that stems from the forfeitability of instruments to which employees have not yet earned the right, such as the inability either to exercise a nonvested equity **share option** or to sell **nonvested shares**, is not reflected in the fair value of the instruments at the grant date. Instead, those restrictions are taken into account by recognizing compensation cost only for awards for which employees render the requisite service.

718-10-55-7 Note that performance and service conditions are vesting conditions for purposes of this Topic. Market conditions are not vesting conditions for purposes of this Topic but market conditions may affect exercisability of an **award**. Market conditions are included in the estimate of the grant-date fair value of awards (see paragraphs 718-10-55-64 through 55-66).

718-10-55-8 **Reload features** and contingent features that require an **employee** to transfer equity shares earned, or realized gains from the sale of equity instruments earned, to the issuing entity for consideration that is less than fair value on the date of transfer (including no consideration), such as a clawback feature, shall not be reflected in the grant-date fair value of an equity award. Those features are accounted for if and when a reload grant or contingent event occurs. A clawback feature can take various forms but often functions as a noncompete mechanism. For example, an employee that terminates the employment relationship and begins to work for a competitor is required to transfer to the issuing entity (former employer) equity shares granted and earned in a share-based payment transaction.

718-10-55-9 The fair value measurement objective for liabilities incurred in a share-based payment transaction with employees is the same as for equity instruments awarded to employees. However, awards classified as liabilities are subsequently remeasured to their fair values (or a portion thereof until the requisite service has been rendered) at the end of each reporting period until the liability is **settled**.

> > Fair-Value-Based Instruments in a Share-Based Transaction

718-10-55-10 The definition of fair value refers explicitly only to assets and liabilities, but the concept of value in a current exchange embodied in it applies equally to the equity instruments subject to this Topic. Observable market prices of identical or similar equity or liability instruments in active markets are the best evidence of fair value and, if available, shall be used as the basis for the measurement of equity and liability instruments awarded in a share-based payment transaction with employees. Determining whether an equity or liability instrument is similar is a matter of judgment, based on an analysis of the terms of the instrument and other relevant facts and circumstances. For example, awards to employees of a **public entity** of shares of its common stock, subject only to a service or **performance condition** for vesting (nonvested shares), shall be measured based on the market price of otherwise identical (that is, identical except for the vesting condition) common stock at the grant date.

718-10-55-11 If observable market prices of identical or similar equity or liability instruments of the entity are not available, the fair value of equity and liability instruments awarded to employees shall be estimated by using a valuation technique that meets all of the following criteria:

a. It is applied in a manner consistent with the fair value measurement objective and the other requirements of this Topic.

b. It is based on established principles of financial economic theory and generally applied in that field (see paragraph 718-10-55-16). Established principles of financial economic theory represent fundamental propositions that form the basis of modern corporate finance (for example, the **time value** of money and risk-neutral valuation).

c. It reflects all substantive characteristics of the instrument (except for those explicitly excluded by this Topic, such as vesting conditions and reload features).

That is, the fair values of equity and liability instruments granted in a share-based payment transaction shall be estimated by applying a valuation technique that would be used in determining an amount at which instruments with the same characteristics (except for those explicitly excluded by this Topic) would be exchanged.

718-10-55-12 An estimate of the amount at which instruments similar to employee share options and other instruments granted to employees would be exchanged would factor in expectations of the probability that the requisite service would be rendered and the instruments would **vest** (that is, that the performance or service conditions would be satisfied). However, as noted in paragraph 718-10-55-4, the measurement objective in this Topic is to estimate the fair value at the grant date of the equity instruments that the entity is obligated to issue when employees have rendered the requisite service and satisfied any other conditions necessary to earn the right to benefit from the instruments. Therefore, the estimated fair value of the instruments at grant date does not take into account the effect on fair value of vesting conditions and other restrictions that apply only during the requisite service period. Under the fair-value-based method required by this Topic, the effect of vesting conditions and other restrictions that apply only during the requisite service period is reflected by recognizing compensation cost only for instruments for which the requisite service is rendered.

> > Valuation Techniques

718-10-55-13 In applying a valuation technique, the assumptions used shall be consistent with the fair value measurement objective. That is, assumptions shall reflect information that is (or would be) available to form the basis for an amount at which the instruments being valued would be exchanged. In estimating fair value, the assumptions used shall not represent the biases of a particular party. Some of those assumptions will be based on or determined from external data. Other assumptions, such as the employees' expected exercise behavior, may be derived from the entity's own historical experience with **share-based payment arrangements**.

718-10-55-14 The fair value of any equity or liability instrument depends on its substantive characteristics. Paragraphs 718-10-55-21 through 55-22 list the minimum set of substantive characteristics of instruments with option (or option-like) features that shall be considered in estimating those instruments' fair value. However, a share-based payment award could contain other characteristics, such as a **market condition**, that should be included in a fair value estimate. Judgment is required to identify an award's substantive characteristics and, as described in paragraphs 718-10-55-15 through 55-20, to select a valuation technique that incorporates those characteristics.

718-10-55-15 Valuation techniques used for employee share options and similar instruments estimate the fair value of those instruments at a single point in time (for example, at the grant date). The assumptions used in a fair value measurement are based on expectations at the time the measurement is made, and those expectations reflect the information that is available at the time of measurement. The fair value of those instruments will change over time as factors used in estimating their fair value subsequently change, for instance, as share prices fluctuate, risk-free interest rates change, or dividend streams are modified. Changes in the fair value of those instruments are a normal economic process to which any valuable resource is subject and do not indicate that the expectations on which previous fair value measurements were based were incorrect. The fair value of those instruments at a single point in time is not a forecast of what the estimated fair value of those instruments may be in the future.

718-10-55-16 A **lattice model** (for example, a binomial model) and a **closed-form model** (for example, the Black-Scholes-Merton formula) are among the valuation techniques that meet the criteria required by this Topic for estimating the fair values of employee share options and similar instruments. A Monte Carlo simulation technique is another type of valuation technique that satisfies the requirements in paragraph 718-10-55-11. Other valuation techniques not mentioned in this Topic also may satisfy the requirements in that paragraph. Those valuation techniques or models, sometimes referred to as option-pricing models, are based on established principles of financial economic theory. Those techniques are used by valuation professionals, dealers of derivative instruments, and others to estimate the fair values of options and similar instruments related to equity securities, currencies, interest rates, and commodities. Those techniques are used to establish trade prices for derivative instruments and to establish values in adjudications. As discussed in paragraphs 718-10-55-21 through 55-50, both lattice models and closed-form models can be adjusted to account for the substantive characteristics of share options and similar instruments granted to employees.

718-10-55-17 This Topic does not specify a preference for a particular valuation technique or model in estimating the fair values of employee share options and similar instruments. Rather, this Topic requires the use of a valuation technique or model that meets the measurement objective in paragraph 718-10-30-6 and the requirements in paragraph 718-10-55-11. The selection of an appropriate valuation technique or model will depend on the substantive characteristics of the instrument being valued. Because an entity may grant different types of instruments, each with its own unique set of substantive characteristics, an entity may use a different valuation technique for each different type of instrument. The appropriate valuation technique or model selected to estimate the fair value of an instrument with a market condition must take into account the effect of that market condition. The designs of some techniques and models better reflect the substantive characteristics of a particular employee share option or similar instrument. Paragraphs 718-10-55-18 through 55-20 discuss certain factors that an entity should consider in selecting a valuation technique or model for its employee share options or similar instruments.

718-10-55-18 The Black-Scholes-Merton formula assumes that option exercises occur at the end of an option's contractual term, and that expected volatility, expected dividends, and risk-free interest rates are constant over the option's term. If used to estimate the fair value of instruments in the scope of this Topic, the Black-Scholes-Merton formula must be adjusted to take account of certain characteristics of employee share options and similar instruments that are not consistent with the model's assumptions (for example, the ability to exercise before the end of the option's contractual term). Because of the nature of the formula, those adjustments take the form of weighted-average assumptions about those characteristics. In contrast, a lattice model can be designed to accommodate dynamic assumptions of expected volatility and dividends over the option's contractual term, and estimates of expected option exercise patterns during the option's contractual term, including the effect of **blackout periods**. Therefore, the design of a lattice model more fully reflects the substantive characteristics of a particular employee share option or similar instrument. Nevertheless, both a lattice model and the Black-Scholes-Merton formula, as well as other valuation techniques that meet the requirements in paragraph 718-10-55-11, can provide a fair value estimate that is consistent with the measurement objective and fair-value-based method of this Topic.

718-10-55-19 Regardless of the valuation technique or model selected, an entity shall develop reasonable and supportable estimates for each assumption used in the model, including the employee share option or similar instrument's expected term, taking into account both the contractual term of the option and the effects of employees' expected exercise and post-vesting employment termination behavior. The term *supportable* is used in its general sense: capable of being maintained, confirmed, or made good; defensible. An application is supportable if it is based on reasonable arguments that consider the substantive characteristics of the instruments being valued and other relevant facts and circumstances.

718-10-55-20 An entity shall change the valuation technique it uses to estimate fair value if it concludes that a different technique is likely to result in a better estimate of fair value (see paragraph 718-10-55-27). For example, an entity that uses a closed-form model might conclude, when information becomes available, that a lattice model or another valuation technique would provide a fair value estimate that better achieves the fair value measurement objective and, therefore, change the valuation technique it uses.

> > Selecting Assumptions for Use in an Option Pricing Model

718-10-55-21 If an observable market price is not available for a share option or similar instrument with the same or similar terms and conditions, an entity shall estimate the fair value of that instrument using a valuation technique or model that meets the requirements in paragraph 718-10-55-11 and takes into account, at a minimum, all of the following:

a. The exercise price of the option.

b. The expected term of the option, taking into account both the contractual term of the option and the effects of employees' expected exercise and postvesting employment termination behavior. In a closed-form model, the expected term is an assumption used in (or input to) the model, while in a lattice model, the expected term is an output of the model (see paragraphs 718-10-55-29 through 55-34, which provide further explanation of the expected term in the context of a lattice model).

c. The current price of the underlying share.

d. The expected volatility of the price of the underlying share for the expected term of the option.

e. The expected dividends on the underlying share for the expected term of the option (except as provided in paragraphs 718-10-55-44 through 55-45).

f. The risk-free interest rate(s) for the expected term of the option.

718-10-55-22 The term *expected* in (b); (d); (e); and (f) in the preceding paragraph relates to expectations at the **measurement date** about the future evolution of the factor that is used as an assumption in a valuation model. The term is not necessarily used in the same sense as in the term *expected future cash flows* that appears elsewhere in the Codification. The phrase *expected term of the option* in (d); (e); and (f) in the preceding paragraph applies to both closed-form models and lattice models (as well as all other valuation techniques). However, if an entity uses a lattice model (or other similar valuation technique, for instance, a Monte Carlo simulation technique) that has been modified to take into account an option's contractual term and employees' expected exercise and post-vesting employment termination behavior, then (d); (e); and (f) in the preceding paragraph apply to the contractual term of the option.

718-10-55-23 There is likely to be a range of reasonable estimates for expected volatility, dividends, and term of the option. If no amount within the range is more or less likely than any other amount, an average of the amounts in the range (the expected value) shall be used. In a lattice model, the assumptions used are to be determined for a particular node (or multiple nodes during a particular time period) of the lattice and not over multiple periods, unless such application is supportable.

718-10-55-24 Historical experience is generally the starting point for developing expectations about the future. Expectations based on historical experience shall be modified to reflect ways in which currently available information indicates that the future is reasonably expected to differ from the past. The appropriate weight to place on historical experience is a matter of judgment, based on relevant facts and circumstances. For example, an entity with two distinctly different lines of business of approximately equal size may dispose of the one that was significantly less volatile and generated more cash than the other. In that situation, the entity might place relatively little weight on volatility, dividends, and perhaps employees' exercise and post-vesting employment termination behavior from the predisposition (or disposition) period in developing reasonable expectations about the future. In contrast, an entity that has not undergone such a restructuring might place heavier weight on historical experience. That entity might conclude, based on its analysis of information available at the time of measurement, that its historical experience provides a reasonable estimate of expected volatility, dividends, and employees' exercise and post-vesting employment termination behavior. This guidance is not intended to suggest either that historical volatility is the only indicator of expected volatility or that an entity must identify a specific event in order to place less weight on historical experience. Expected volatility is an expectation of volatility over the expected term of an employee share option or similar instrument; that expectation shall consider all relevant factors in paragraph 718-10-55-37, including possible mean reversion. Paragraphs 718-10-55-35 through 55-41 provide further guidance on estimating expected volatility.

718-10-55-25 In certain circumstances, historical information may not be available. For example, an entity whose common stock has only recently become publicly traded may have little, if any, historical information on the volatility of its own shares. That entity might base expectations about future volatility on the average volatilities of similar entities for an appropriate period following their going public. A **nonpublic entity** will need to exercise judgment in selecting a method to estimate expected volatility and might do so by basing its expected volatility on the average volatilities of otherwise similar public entities. For purposes of identifying otherwise similar entities, an entity would likely consider characteristics such as industry, stage of life cycle, size, and financial leverage. Because of the effects of diversification that are present in an industry sector index, the volatility of an index should not be substituted for the average of volatilities of otherwise similar entities in a fair value measurement.

718-10-55-26 This guidance is organized as follows:

a. Selecting consistent assumptions

b. Selecting or estimating the risk-free rate for the expected term

c. Selecting or estimating the expected term

d. Selecting or estimating the expected volatility

e. Selecting or estimating expected dividends

f. Dividend protected awards

g. Selecting or considering credit risk

h. Contingency features that affect the option pricing model

i. Consider dilution.

> > > Consistent Use of Valuation Techniques and Methods for Selecting Assumptions

718-10-55-27 Assumptions used to estimate the fair value of equity and liability instruments granted to employees shall be determined in a consistent manner from period to period. For example, an entity might use the closing share price or the share price at another specified time as the current share price on the grant date in estimating fair value, but whichever method is selected, it shall be used consistently. The valuation technique an entity selects to estimate fair value for a particular type of instrument also shall be used consistently and shall not be changed unless a different valuation technique is expected to produce a better estimate of fair value. A change in either the valuation technique or the method of determining appropriate assumptions used in a valuation technique is a change in accounting estimate for purposes of applying Topic 250, and shall be applied prospectively to new awards.

> > > Selecting or Estimating the Risk-free Rate for the Expected Term

718-10-55-28 Option-pricing models call for the risk-free interest rate as an assumption to take into account, among other things, the time value of money. A U.S. entity issuing an option on its own shares must use as the risk-free interest rates the implied yields currently available from the U.S. Treasury zero-coupon yield curve over the contractual term of the option if the entity is using a lattice model incorporating the option's contractual term. If the entity is using a closed-form model, the risk-free interest rate is the implied yield currently available on U.S. Treasury zero-coupon issues with a remaining term equal to the expected term used as the assumption in the model. For entities based in jurisdictions outside the United States, the risk-free interest rate is the implied yield currently available on zero-coupon government issues denominated in the currency of the market in which the share (or underlying share), which is the basis for the instrument awarded, primarily trades. It may be necessary to use an appropriate substitute if no such government issues exist or if circumstances indicate that the implied yield on zero-coupon government issues is not representative of a risk-free interest rate.

> > > Selecting or Estimating the Expected Term

718-10-55-29 The fair value of a traded (or transferable) share option is based on its contractual term because rarely is it economically advantageous to exercise, rather than sell, a transferable share option before the end of its contractual term. Employee share options generally differ from transferable share options in that employees cannot sell (or hedge) their share options—they can only exercise them; because of this, employees generally exercise their options before the end of the options' contractual term. Thus, the inability to sell or hedge an employee share option effectively reduces the option's value because exercise prior to the option's expiration terminates its remaining life and thus its remaining time value. In addition, some employee share options contain prohibitions on exercise during blackout periods. To reflect the effect of those restrictions (which may lead to exercise before the end of the option's contractual term) on employee options relative to transferable options, this Topic requires that the fair value of an employee share option or similar instrument be based on its expected term, rather than its contractual term (see paragraphs 718-10-55-5 and 718-10-55-21).

718-10-55-30 The expected term of an employee share option or similar instrument is the period of time for which the instrument is expected to be outstanding (that is, the period of time from the service inception date to the date of expected exercise or other expected settlement). The expected term is an assumption in a closed-form model. However, if an entity uses a lattice model that has been modified to take into account an option's contractual term and employees' expected exercise and post-vesting employment termination behavior, the expected term is estimated based on the resulting output of the lattice. For example, an entity's experience might indicate that option holders tend to exercise their options when the share price reaches 200 percent of the exercise price. If so, that entity might use a lattice model that assumes exercise of the option at each node along each share price path in a lattice at which the early exercise expectation is met, provided that the option is vested and exercisable at that point. Moreover, such a model would assume exercise at the end of the contractual term on price paths along which the exercise expectation is not met but the options are in-the-money at the end of the contractual term. The terms *at-the-money*, *in-the-money*, and *out-of-the-money* are used to describe share options whose exercise price is equal to, less than, or greater than the market price of the underlying share, respectively. The valuation approach described recognizes that employees' exercise behavior is correlated with the price of the underlying share. Employees' expected post-vesting employment termination behavior also would be factored in. Expected term, which is a required disclosure (see paragraph 718-10-50-2), then could be estimated based on the output of the resulting lattice. An example of an acceptable method for purposes of financial statement disclosures of estimating the expected term based on the results of a lattice model is to use the lattice model's estimated fair value of a share option as an input to a closed-form model, and then to solve the closed-form model for the expected term. Other methods also are available to estimate expected term.

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The expected term of an employee share option or similar instrument is the period of time for which the instrument is expected to be outstanding (that is, the period of time from the service inception date to the date of expected exercise or other expected settlement). The expected term is an assumption in a closed-form model. However, if an entity uses a lattice model that has been modified to take into account an option's contractual term and employees' expected exercise and post-vesting employment termination behavior, the expected term is estimated based on the resulting output of the lattice. For example, an entity's experience might indicate that option holders tend to exercise their options when the share price reaches 200 percent of the exercise price. If so, that entity might use a lattice model that assumes exercise of the option at each node along each share price path in a lattice at which the early exercise expectation is met, provided that the option is vested and exercisable at that point. Moreover, such a model would assume exercise at the end of the contractual term on price paths along which the exercise expectation is not met but the options are in-the-money at the end of the contractual term. The terms *at-the-money*, *in-the-money*, and *out-of-the-money* are used to describe share options whose exercise price is equal to, less than, or greater than the market price of the underlying share, respectively. The valuation approach described recognizes that employees' exercise behavior is correlated with the price of the underlying share. Employees' expected post-vesting employment termination behavior also would be factored in. Expected term, which is a required disclosure (see paragraphs 718-10-50-2 through 50-2A), then could be estimated based on the output of the resulting lattice. An example of an acceptable method for purposes of financial statement disclosures of estimating the expected term based on the results of a lattice model is to use the lattice model's estimated fair value of a share option as an input to a closed-form model, and then to solve the closed-form model for the expected term. Other methods also are available to estimate expected term.

718-10-55-31 Other factors that may affect expectations about employees' exercise and post-vesting employment termination behavior include the following:

a. The vesting period of the award. An option's expected term must at least include the vesting period. Under some share option arrangements, an option holder may exercise an option prior to vesting (usually to obtain a specific tax treatment); however, such arrangements generally require that any shares received upon exercise be returned to the entity (with or without a return of the exercise price to the holder) if the vesting conditions are not satisfied. Such an exercise is not substantive for accounting purposes.

b. Employees' historical exercise and post-vesting employment termination behavior for similar grants.

c. Expected volatility of the price of the underlying share. An entity also might consider whether the evolution of the share price affects an employee's exercise behavior (for example, an employee may be more likely to exercise a share option shortly after it becomes in-the-money if the option had been out-of-the-money for a long period of time).

d. Blackout periods and other coexisting arrangements such as agreements that allow for exercise to automatically occur during blackout periods if certain conditions are satisfied.

e. Employees' ages, lengths of service, and home jurisdictions (that is, domestic or foreign).

718-10-55-32 If sufficient information about employees' expected exercise and post-vesting employment termination behavior is available, a method like the one described in paragraph 718-10-55-30 might be used because that method reflects more information about the instrument being valued (see paragraph 718-10-55-18). However, expected term might be estimated in some other manner, taking into account whatever relevant and supportable information is available, including industry averages and other pertinent evidence such as published academic research.

718-10-55-33 Option value increases at a decreasing rate as the term lengthens (for most, if not all, options). For example, a two-year option is worth less than twice as much as a one-year option, other things equal. Accordingly, estimating the fair value of an option based on a single expected term that effectively averages the differing exercise and postvesting employment termination behaviors of identifiable groups of employees will potentially misstate the value of the entire award.

718-10-55-34 Aggregating individual awards into relatively homogeneous groups with respect to exercise and postvesting employment termination behaviors and estimating the fair value of the options granted to each group separately reduces such potential misstatement. An entity shall aggregate individual awards into relatively homogeneous groups with respect to exercise and postvesting employment termination behaviors regardless of the valuation technique or model used to estimate the fair value. For example, the historical experience of an employer that grants options broadly to all levels of employees might indicate that hourly employees tend to exercise for a smaller percentage gain than do salaried employees.

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A nonpublic entity may make an accounting policy election to apply a practical expedient to estimate the expected term for certain awards that do not include a **market condition** (see paragraphs 718-10-30-20A through 30-20B). Paragraph 718-10-55-50A provides implementation guidance on the practical expedient.

> > > Selecting or Estimating the Expected Volatility

718-10-55-35 As with other aspects of estimating fair value, the objective is to determine the assumption about expected **volatility** that marketplace participants would be likely to use in determining an exchange price for an option.

718-10-55-36 Volatility is a measure of the amount by which a financial variable, such as share price, has fluctuated (historical volatility) or is expected to fluctuate (expected volatility) during a period. Option-pricing models require expected volatility as an assumption because an option's value is dependent on potential share returns over the option's term. The higher the volatility, the more the returns on the shares can be expected to vary—up or down. Because an option's value is unaffected by expected negative returns on the shares, other things equal, an option on a share with higher volatility is worth more than an option on a share with lower volatility. This Topic does not specify a method of estimating expected volatility; rather, the following paragraph provides a list of factors that shall be considered in estimating expected volatility. An entity's estimate of expected volatility shall be reasonable and supportable.

718-10-55-37 Factors to consider in estimating expected volatility include the following:

a. Volatility of the share price, including changes in that volatility and possible mean reversion of that volatility. Mean reversion refers to the tendency of a financial variable, such as volatility, to revert to some long-run average level. Statistical models have been developed that take into account the mean-reverting tendency of volatility. In computing historical volatility, for example, an entity might disregard an identifiable period of time in which its share price was extraordinarily volatile because of a failed takeover bid if a similar event is not expected to recur during the expected or contractual term. If an entity's share price was extremely volatile for an identifiable period of time, due to a general market decline, that entity might place less weight on its volatility during that period of time because of possible mean reversion. Volatility over the most recent period is generally commensurate with either of the following:

1. The contractual term of the option if a lattice model is being used to estimate fair value

2. The expected term of the option if a closed-form model is being used. An entity might evaluate changes in volatility and mean reversion over that period by dividing the contractual or expected term into regular intervals and evaluating evolution of volatility through those intervals.

b. The implied volatility of the share price determined from the market prices of traded options or other traded financial instruments such as outstanding convertible debt, if any.

c. For a public entity, the length of time its shares have been publicly traded. If that period is shorter than the expected or contractual term of the option, the term structure of volatility for the longest period for which trading activity is available shall be more relevant. A newly public entity also might consider the expected volatility of similar entities. In evaluating similarity, an entity would likely consider factors such as industry, stage of life cycle, size, and financial leverage. A nonpublic entity might base its expected volatility on the expected volatilities of entities that are similar except for having publicly traded securities.

d. Appropriate and regular intervals for price observations. If an entity considers historical volatility in estimating expected volatility, it shall use intervals that are appropriate based on the facts and circumstances and that provide the basis for a reasonable fair value estimate. For example, a publicly traded entity would likely use daily price observations, while a nonpublic entity with shares that occasionally change hands at negotiated prices might use monthly price observations.

e. Corporate and capital structure. An entity's corporate structure may affect expected volatility (see paragraph 718-10-55-24). An entity's capital structure also may affect expected volatility; for example, highly leveraged entities tend to have higher volatilities.

718-10-55-38 Although use of unadjusted historical volatility may be appropriate for some entities (or even for most entities in some time periods), a marketplace participant would not use historical volatility without considering the extent to which the future is likely to differ from the past.

718-10-55-39 A closed-form model, such as the Black-Scholes-Merton formula, cannot incorporate a range of expected volatilities over the option's expected term (see paragraph 718-10-55-18). Lattice models can incorporate a term structure of expected volatility; that is, a range of expected volatilities can be incorporated into the lattice over an option's contractual term. Determining how to incorporate a range of expected volatilities into a lattice model to provide a reasonable fair value estimate is a matter of judgment and shall be based on a careful consideration of the factors listed in paragraph 718-10-55-37 as well as other relevant factors that are consistent with the fair value measurement objective of this Topic.

718-10-55-40 An entity shall establish a process for estimating expected volatility and apply that process consistently from period to period (see paragraph 718-10-55-27). That process:

a. Shall comprehend an identification of information available to the entity and applicable factors such as those described in paragraph 718-10-55-37

b. Shall include a procedure for evaluating and weighting that information.

718-10-55-41 The process developed by an entity shall be determined by the information available to it and its assessment of how that information would be used to estimate fair value. For example, consistent with paragraph 718-10-55-24, an entity's starting point in estimating expected volatility might be its historical volatility. That entity also shall consider the extent to which currently available information indicates that future volatility will differ from the historical volatility. An example of such information is implied volatility (from traded options or other instruments).

> > > Selecting or Estimating Expected Dividends

718-10-55-42 Option-pricing models generally call for expected dividend yield as an assumption. However, the models may be modified to use an expected dividend amount rather than a yield. An entity may use either its expected yield or its expected payments. Additionally, an entity's historical pattern of dividend increases (or decreases) shall be considered. For example, if an entity has historically increased dividends by approximately 3 percent per year, its estimated share option value shall not be based on a fixed dividend amount throughout the share option's expected term. As with other assumptions in an option-pricing model, an entity shall use the expected dividends that would likely be reflected in an amount at which the option would be exchanged (see paragraph 718-10-55-13).

718-10-55-43 As with other aspects of estimating fair value, the objective is to determine the assumption about expected dividends that would likely be used by marketplace participants in determining an exchange price for the option.

> > > Dividend Protected Awards

718-10-55-44 Expected dividends are taken into account in using an option-pricing model to estimate the fair value of a share option because dividends paid on the underlying shares reduce the fair value of those shares and option holders generally are not entitled to receive those dividends. However, an award of share options may be structured to protect option holders from that effect by providing them with some form of dividend rights. Such dividend protection may take a variety of forms and shall be appropriately reflected in estimating the fair value of a share option. For example, if a dividend paid on the underlying shares is applied to reduce the exercise price of the option, the effect of the dividend protection is appropriately reflected by using an expected dividend assumption of zero.

718-10-55-45 In certain situations, employees may receive the dividends paid on the underlying equity shares while the option is outstanding. Dividends or dividend equivalents paid to employees on the portion of an award of equity shares or other equity instruments that vests shall be charged to retained earnings. If employees are not required to return the dividends or dividend equivalents received if they forfeit their awards, dividends or dividend equivalents paid on instruments that do not vest shall be recognized as additional compensation cost. The estimate of compensation cost for dividends or dividend equivalents paid on instruments that are not expected to vest shall be consistent with an entity's estimates of forfeitures (see paragraph 718-10-35-3).

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In certain situations, employees may receive the dividends paid on the underlying equity shares while the option is outstanding. Dividends or dividend equivalents paid to employees on the portion of an award of equity shares or other equity instruments that vests shall be charged to retained earnings. If employees are not required to return the dividends or dividend equivalents received if they forfeit their awards, dividends or dividend equivalents paid on instruments that do not vest shall be recognized as additional compensation cost. If an entity's accounting policy is to estimate the number of awards expected to be forfeited in accordance with paragraph 718-10-35-3, the estimate of compensation cost for dividends or dividend equivalents paid on instruments that are not expected to vest shall be consistent with an entity's estimates of forfeitures. Dividends and dividend equivalents shall be reclassified between retained earnings and compensation cost in a subsequent period if the entity changes its forfeiture estimates (or actual forfeitures differ from previous estimates). If an entity's accounting policy is to account for forfeitures when they occur in accordance with paragraph 718-10-35-3, the entity shall reclassify to compensation cost in the period in which the forfeitures occur the amount of dividends and dividend equivalents previously charged to retained earnings relating to awards that are forfeited.

> > > Selecting or Considering Credit Risk

718-10-55-46 An entity may need to consider the effect of its credit risk on the estimated fair value of liability awards that contain cash settlement features because potential cash payoffs from the awards are not independent of the entity's risk of default. Any credit-risk adjustment to the estimated fair value of awards with cash payoffs that increase with increases in the price of the underlying share is expected to be de minimis because increases in an entity's share price generally are positively associated with its ability to liquidate its liabilities. However, a credit-risk adjustment to the estimated fair value of awards with cash payoffs that increase with decreases in the price of the entity's shares may be necessary because decreases in an entity's share price generally are negatively associated with an entity's ability to liquidate its liabilities.

> > > Contingency Features that Affect the Option Pricing Model

718-10-55-47 Contingent features that might cause an employee to return to the entity either equity shares earned or realized gains from the sale of equity instruments earned as a result of share-based payment arrangements, such as a clawback feature (see paragraph 718-10-55-8), shall not be reflected in estimating the grant-date fair value of an equity instrument. Instead, the effect of such a contingent feature shall be accounted for if and when the contingent event occurs. For instance, a share-based payment arrangement may stipulate the return of vested equity shares to the issuing entity for no consideration if the employee terminates the employment relationship to work for a competitor. The effect of that provision on the grant-date fair value of the equity shares shall not be considered. If the issuing entity subsequently receives those shares (or their equivalent value in cash or other assets) as a result of that provision, a credit shall be recognized in the income statement upon the receipt of the shares. That credit is limited to the lesser of the recognized compensation cost associated with the share-based payment arrangement that contains the contingent feature and the fair value of the consideration received. The event is recognized in the income statement because the resulting transaction takes place with an employee (or former employee) as a result of the current (or prior) employment relationship rather than as a result of the employee's role as an equity owner. Example 10 (see paragraph 718-20-55-84) provides an illustration of the accounting for an award that contains a clawback feature.

> > > Consider Dilution

718-10-55-48 Traded options ordinarily are written by parties other than the entity that issues the underlying shares, and when exercised result in an exchange of already outstanding shares between those parties. In contrast, exercise of employee share options results in the issuance of new shares by the entity that wrote the option (the employer), which increases the number of shares outstanding. That dilution might reduce the fair value of the underlying shares, which in turn might reduce the benefit realized from option exercise.

718-10-55-49 If the market for an entity's shares is reasonably efficient, the effect of potential dilution from the exercise of employee share options will be reflected in the market price of the underlying shares, and no adjustment for potential dilution usually is needed in estimating the fair value of the employee share options. For a public entity, an exception might be a large grant of options that the market is not expecting, and also does not believe will result in commensurate benefit to the entity. For a nonpublic entity, on the other hand, potential dilution may not be fully reflected in the share price if sufficient information about the frequency and size of the entity's grants of equity share options is not available for third parties who may exchange the entity's shares to anticipate the dilutive effect.

718-10-55-50 An entity shall consider whether the potential dilutive effect of an award of share options needs to be reflected in estimating the fair value of its options at the grant date. For public entities, the expectation is that situations in which such a separate adjustment is needed will be rare.

> > Nonpublic Entity—Practical Expedient for Expected Term

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In accordance with paragraph 718-10-30-20A, a nonpublic entity may elect a practical expedient to estimate the expected term. For liability-classified awards, an entity would update the estimate of the expected term each reporting period until settlement. The updated estimate should reflect the loss of time value associated with the award and any change in the assessment of whether a performance condition is probable of being achieved.

> > Calculated Value for Certain Nonpublic Entities

718-10-55-51 Nonpublic entities may have sufficient information available on which to base a reasonable and supportable estimate of the expected volatility of their share prices. For example, a nonpublic entity that has an internal market for its shares, has private transactions in its shares, or issues new equity or convertible debt instruments may be able to consider the historical volatility, or implied volatility, of its share price in estimating expected volatility. Alternatively, a nonpublic entity that can identify similar public entities for which share or option price information is available may be able to consider the historical, expected, or implied volatility of those entities' share prices in estimating expected volatility. Similarly this information may be used to estimate the fair value of its shares or to benchmark various aspects of its performance (see paragraph 718-10-55-25).

718-10-55-52 This Topic requires all entities to use the fair-value-based method to account for share-based payment arrangements that are classified as equity instruments. However, if it is not practicable for a nonpublic entity to estimate the expected volatility of its share price, paragraph 718-10-30-20 requires it to use the **calculated value** method. Alternatively, it may not be possible for a nonpublic entity to reasonably estimate the fair value of its equity share options and similar instruments at the date they are granted because the complexity of the award's terms prevents it from doing so. In that case, paragraphs 718-10-30-21 through 30-22 require that the nonpublic entity account for its equity instruments at their **intrinsic value**, remeasured at each reporting date through the date of exercise or other settlement.

718-10-55-53 Relatively few small nonpublic entities offer share options to their employees, and those that do often are emerging entities that intend to make a future initial public offering. Many of those nonpublic entities that plan an initial public offering likely will be able to reasonably estimate the fair value of their equity share options and similar instruments using the guidance on selecting an appropriate expected volatility assumption provided in paragraphs 718-10-55-35 through 55-41.

718-10-55-54 Estimating the expected volatility of a nonpublic entity's shares may be difficult and that the resulting estimated fair value may be more subjective than the estimated fair value of a public entity's options. However, many nonpublic entities could consider internal and industry factors likely to affect volatility, and the average volatility of comparable entities, to develop an estimate of expected volatility. Using an expected volatility estimate determined in that manner often would result in a reasonable estimate of fair value.

718-10-55-55 For purposes of this Topic, it is not practicable for a nonpublic entity to estimate the expected volatility of its share price if it is unable to obtain sufficient historical information about past volatility, or other information such as that noted in paragraph 718-10-55-51, on which to base a reasonable and supportable estimate of expected volatility at the grant date of the award without undue cost and effort. In that situation, this Topic requires a nonpublic entity to estimate a value for its equity share options and similar instruments by substituting the historical volatility of an appropriate industry sector index for the expected volatility of its share price as an assumption in its valuation model. All other inputs to a nonpublic entity's valuation model shall be determined in accordance with the guidance in paragraphs 718-10-55-4 through 55-47.

718-10-55-56 There are many different indexes available to consider in selecting an appropriate industry sector index. For example, Dow Jones Indexes maintain a global series of stock market indexes with industry sector splits available for many countries, including the United States. The historical values of those indexes are easily obtainable from its website. An appropriate industry sector index is one that is representative of the industry sector in which the nonpublic entity operates and that also reflects, if possible, the size of the entity. If a nonpublic entity operates in a variety of different industry sectors, then it might select a number of different industry sector indexes and weight them according to the nature of its operations; alternatively, it might select an index for the industry sector that is most representative of its operations. If a nonpublic entity operates in an industry sector in which no public entities operate, then it shall select an index for the industry sector that is most closely related to the nature of its operations. However, in no circumstances shall a nonpublic entity use a broad-based market index like the S&P 500, Russell 3000, or Dow Jones Wilshire 5000 because those indexes are sufficiently diversified as to be not representative of the industry sector, or sectors, in which the nonpublic entity operates.

718-10-55-57 A nonpublic entity shall use the selected index consistently, unless the nature of the entity's operations changes such that another industry sector index is more appropriate, in applying the calculated value method in both the following circumstances:

a. For all of its equity share options or similar instruments

b. In each accounting period.

718-10-55-58 The calculation of the historical volatility of an appropriate industry sector index shall be made using the daily historical closing values of the index selected for the period of time prior to the grant date (or service inception date) of the equity share option or similar instrument that is equal in length to the expected term of the equity share option or similar instrument. If daily values are not readily available, then an entity shall use the most frequent observations available of the historical closing values of the selected index. If historical closing values of the index selected are not available for the entire expected term, then a nonpublic entity shall use the closing values for the longest period of time available. The method used shall be consistently applied (see paragraph 718-10-55-27). Example 9 (see paragraph 718-20-55-77) provides an illustration of accounting for an equity share option award granted by a nonpublic entity that uses the calculated value method.

> > Market, Performance, and Service Conditions

718-10-55-59 This guidance is organized as follows:

a. Market, performance, and service conditions that affect vesting and exercisability

b. Market, performance, and service conditions that affect factors other than vesting and exercisability

c. Estimating the requisite service period

d. Explicit, implicit, and derived requisite service periods.

> > > Market, Performance, and Service Conditions that Affect Vesting and Exercisability

718-10-55-60 An employee's share-based payment award becomes vested at the date that the employee's right to receive or retain equity shares, other equity instruments, or assets under the award is no longer contingent on satisfaction of either a performance condition or a **service condition**. This Topic distinguishes among market conditions, performance conditions, and service conditions that affect the vesting or exercisability of an award (see paragraphs 718-10-30-12 and 718-10-30-14). Exercisability is used for market conditions in the same context as vesting is used for performance and service conditions. Other conditions affecting vesting, exercisability, exercise price, and other pertinent factors in measuring fair value that do not meet the definitions of a market condition, performance condition, or service condition are discussed in paragraph 718-10-55-65.

718-10-55-61 Analysis of the market, performance, or service conditions (or any combination thereof) that are explicit or implicit in the terms of an award is required to determine the requisite service period over which compensation cost is recognized and whether recognized compensation cost may be reversed if an award fails to vest or become exercisable (see paragraph 718-10-30-27). If exercisability or the ability to retain the award (for example, an award of equity shares may contain a market condition that affects the employee's ability to retain those shares) is based solely on one or more market conditions compensation cost for that award is recognized if the employee renders the requisite service, even if the market condition is not satisfied. An award containing one or more market conditions may have an **explicit**, **implicit**, or **derived service period**. Paragraphs 718-10-55-69 through 55-79 provide guidance on explicit, implicit, and derived service periods. If exercisability (or the ability to retain the award) is based solely on one or more market conditions, compensation cost for that award is reversed if the employee does not render the requisite service, unless the market condition is satisfied prior to the end of the requisite service period, in which case any unrecognized compensation cost would be recognized at the time the market condition is satisfied. If vesting is based solely on one or more performance or service conditions, any previously recognized compensation cost is reversed if the award does not vest (that is, the requisite service is not rendered). Examples 1 through 4 (see paragraphs 718-20-55-4 through 55-50) provide illustrations of awards in which vesting is based solely on performance or service conditions.

718-10-55-62 Vesting or exercisability may be conditional on satisfying two or more types of conditions (for example, vesting and exercisability occur upon satisfying both a market and a performance or service condition). Vesting also may be conditional on satisfying one of two or more types of conditions (for example, vesting and exercisability occur upon satisfying either a market condition or a performance or service condition). Regardless of the nature and number of conditions that must be satisfied, the existence of a market condition requires recognition of compensation cost if the requisite service is rendered, even if the market condition is never satisfied.

718-10-55-63 Even if only one of two or more conditions must be satisfied and a market condition is present in the terms of the award, then compensation cost is recognized if the requisite service is rendered, regardless of whether the market, performance, or service condition is satisfied (see Example 5 [paragraph 718-10-55-100] provide an example of such an award).

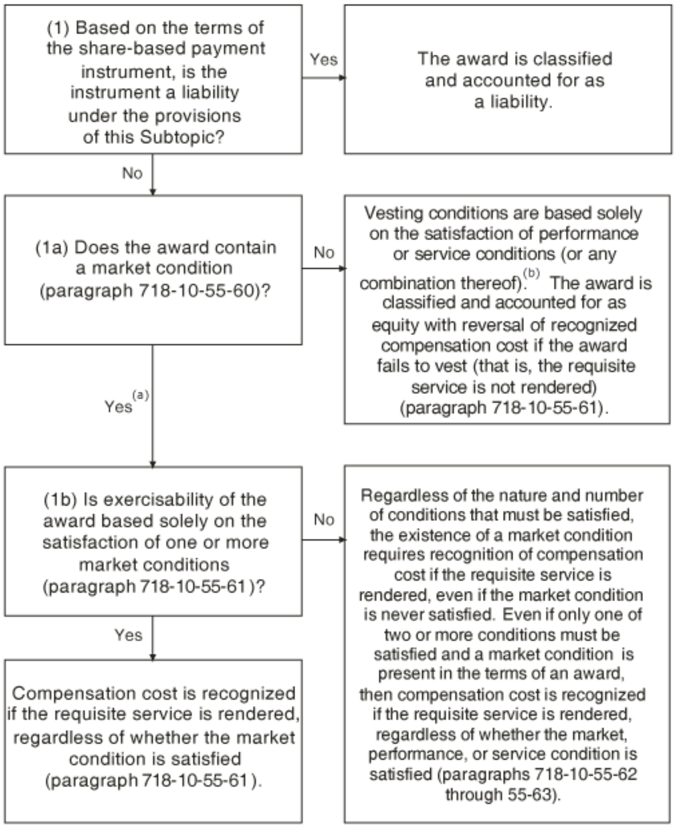
> > > Market, Performance, and Service Conditions that Affect Factors Other than Vesting and Exercisability

718-10-55-64 Market, performance, and service conditions may affect an award's exercise price, contractual term, quantity, conversion ratio, or other pertinent factors that are relevant in measuring an award's fair value. For instance, an award's quantity may double, or an award's contractual term may be extended, if a company-wide revenue target is achieved. Market conditions that affect an award's fair value (including exercisability) are included in the estimate of grant-date fair value (see paragraph 718-10-30-15). Performance or service conditions that only affect vesting are excluded from the estimate of grant-date fair value, but all other performance or service conditions that affect an award's fair value are included in the estimate of grant-date fair value (see that same paragraph). Examples 3, 4, and 6 (see paragraphs 718-20-55-41, 718-20-55-47, and 718-20-55-61) provide further guidance on how performance conditions are considered in the estimate of grant-date fair value.

718-10-55-65 An award may be indexed to a factor in addition to the entity's share price. If that factor is not a market, performance, or service condition, that award shall be classified as a liability for purposes of this Topic (see paragraphs 718-10-25-13 through 25-14A). An example would be an award of options whose exercise price is indexed to the market price of a commodity, such as gold. Another example would be a share award that will vest based on the appreciation in the price of a commodity, such as gold; that award is indexed to both the value of that commodity and the issuing entity's shares. If an award is so indexed, the relevant factors shall be included in the fair value estimate of the award. Such an award would be classified as a liability even if the entity granting the share-based payment instrument is a producer of the commodity whose price changes are part or all of the conditions that affect an award's vesting conditions or fair value.

718-10-55-66 The following flowchart provides guidance on determining how to account for an award based on the existence of market, performance, or service conditions (or any combination thereof).

Accounting for Awards with Market, Performance, or Service Conditions



(a) The award shall be classified and accounted for as equity. Market conditions are included in the grant-date fair value estimate of the award.

(b) Performance and service conditions that affect vesting are not included in estimating the grant-date fair value of the award. Performance and service conditions that affect the exercise price, contractual term, conversion ratio, or other pertinent factors affecting the fair value of an award are included in estimating the grant-date fair value of the award.

> > > Estimating the Requisite Service Period

718-10-55-67 Paragraph 718-10-35-2 requires that compensation cost be recognized over the requisite service period. The requisite service period for an award that has only a service condition is presumed to be the vesting period, unless there is clear evidence to the contrary. The requisite service period shall be estimated based on an analysis of the terms of the award and other relevant facts and circumstances, including co-existing employment agreements and an entity's past practices; that estimate shall ignore nonsubstantive vesting conditions. For example, the grant of a deep out-of-the-money share option award without an explicit service condition will have a derived service period. Likewise, if an award with an explicit service condition that was at-the-money when granted is subsequently modified to accelerate vesting at a time when the award is deep out-of-the-money, that **modification** is not substantive because the explicit service condition is replaced by a derived service condition. If a market, performance, or service condition requires future service for vesting (or exercisability), an entity cannot define a prior period as the requisite service period. The requisite service period for awards with market, performance, or service conditions (or any combination thereof) shall be consistent with assumptions used in estimating the grant-date fair value of those awards.

718-10-55-68 An employee's share-based payment award becomes vested at the date that the employee's right to receive or retain equity shares, other equity instruments, or cash under the award is no longer contingent on satisfaction of either a performance condition or a service condition. Any unrecognized compensation cost shall be recognized when an award becomes vested. If an award includes no market, performance, or service conditions, then the entire amount of compensation cost shall be recognized when the award is granted (which also is the date of issuance in this case). Example 1 (see paragraph 718-10-55-86) provides an illustration of estimating the requisite service period.

> > > Explicit, Implicit, and Derived Requisite Service Periods

718-10-55-69 A requisite service period may be explicit, implicit, or derived. An **explicit service period** is one that is stated in the terms of the share-based payment award. For example, an award that vests after three years of continuous employee service has an explicit service period of three years, which also would be the requisite service period.

718-10-55-70 An **implicit service period** is one that may be inferred from an analysis of an award's terms. For example, if an award of share options vests only upon the completion of a new product design and the design is expected to be completed 18 months from the grant date, the implicit service period is 18 months, which also would be the requisite service period.

718-10-55-71 A derived service period is based on a market condition in a share-based payment award that affects exercisability, exercise price, or the employee's ability to retain the award. A derived service period is inferred from the application of certain valuation techniques used to estimate fair value. For example, the derived service period for an award of share options that an employee can exercise only if the share price doubles at any time during a five-year period can be inferred from certain valuation techniques that are used to estimate fair value. This example, and others noted in this Section, implicitly assume that the rights conveyed by the instrument to the holder are dependent on the holder's being an employee of the entity. That is, if the employment relationship is terminated, the award lapses or is forfeited shortly thereafter. In a lattice model, that derived service period represents the duration of the median of the distribution of share price paths on which the market condition is satisfied. That median is the middle share price path (the midpoint of the distribution of paths) on which the market condition is satisfied. The duration is the period of time from the service inception date to the expected date of market condition satisfaction (as inferred from the valuation technique). For example, if the derived service period is three years, the requisite service period is three years and all compensation cost would be recognized over that period, unless the market condition is satisfied at an earlier date, in which case any unrecognized compensation cost would be recognized immediately upon its satisfaction. If the requisite service is not rendered, all previously recognized compensation cost would be reversed. If the requisite service is rendered, the recognized compensation is not reversed even if the market condition is never satisfied. An entity that uses a closed-form model to estimate the grant-date fair value of an award with a market condition may need to use another valuation technique to estimate the derived service period.

718-10-55-72 An award with a combination of market, performance, or service conditions may contain multiple explicit, implicit, or derived service periods. For such an award, the estimate of the requisite service period shall be based on an analysis of all of the following:

a. All vesting and exercisability conditions

b. All explicit, implicit, and derived service periods

c. The probability that performance or service conditions will be satisfied.

718-10-55-73 Thus, if vesting (or exercisability) of an award is based on satisfying both a market condition and a performance or service condition and it is probable that the performance or service condition will be satisfied, the initial estimate of the requisite service period generally is the longest of the explicit, implicit, or derived service periods. If vesting (or exercisability) of an award is based on satisfying either a market condition or a performance or service condition and it is probable that the performance or service condition will be satisfied, the initial estimate of the requisite service period generally is the shortest of the explicit, implicit, or derived service periods.

718-10-55-74 For example, a share option might specify that vesting occurs after three years of continuous employee service or when the employee completes a specified project. The employer estimates that it is **probable** that the project will be completed within 18 months. The employer also believes it is probable that the service condition will be satisfied. Thus, that award contains an explicit service period of 3 years related to the service condition and an implicit service period of 18 months related to the performance condition. Because it is considered probable that both the performance condition and the service condition will be achieved, the requisite service period over which compensation cost is recognized is 18 months, which is the shorter of the explicit and implicit service periods.

718-10-55-75 As illustrated in the preceding paragraph , if an award vests upon the earlier of the satisfaction of a service condition (for example, four years of service) or the satisfaction of one or more performance conditions, it will be necessary to estimate when, if at all, the performance conditions are probable of achievement. For example, if initially the four-year service condition is probable of achievement and no performance condition is probable of achievement, the requisite service period is four years. If one year into the four-year requisite service period a performance condition becomes probable of achievement by the end of the second year, the requisite service period would be revised to two years for attribution of compensation cost (at that point in time, there would be only one year of the two-year requisite service period remaining).

718-10-55-76 If an award vests upon the satisfaction of both a service condition and the satisfaction of one or more performance conditions, the entity also must initially determine which outcomes are probable of achievement. For example, an award contains a four-year service condition and two performance conditions, all of which need to be satisfied. If initially the four-year service condition is probable of achievement and no performance condition is probable of achievement, then no compensation cost would be recognized unless the two performance conditions and the service condition subsequently become probable of achievement. If both performance conditions become probable of achievement one year after the grant date and the entity estimates that both performance conditions will be achieved by the end of the second year, the requisite service period would be four years as that is the longest period of both the explicit service period and the implicit service periods. Because the requisite service is now expected to be rendered, compensation cost will be recognized in the period of the change in estimate (see paragraph 718-10-35-3) as the cumulative effect on current and prior periods of the change in the estimated number of awards for which the requisite service is expected to be rendered. Therefore, compensation cost for the first year will be recognized immediately at the time of the change in estimate for the awards for which the requisite service is expected to be rendered. The remaining unrecognized compensation cost for those awards would be recognized prospectively over the remaining requisite service period.

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If an award vests upon the satisfaction of both a service condition and the satisfaction of one or more performance conditions, the entity also must initially determine which outcomes are probable of achievement. For example, an award contains a four-year service condition and two performance conditions, all of which need to be satisfied. If initially the four-year service condition is probable of achievement and no performance condition is probable of achievement, then no compensation cost would be recognized unless the two performance conditions and the service condition subsequently become probable of achievement. If both performance conditions become probable of achievement one year after the grant date and the entity estimates that both performance conditions will be achieved by the end of the second year, the requisite service period would be four years as that is the longest period of both the explicit service period and the implicit service periods. Because the performance conditions are now probable of achievement, compensation cost will be recognized in the period of the change in estimate (see paragraph 718-10-35-3) as the cumulative effect on current and prior periods of the change in the estimated number of awards for which the requisite service is expected to be rendered. Therefore, compensation cost for the first year will be recognized immediately at the time of the change in estimate for the awards for which the requisite service is expected to be rendered. The remaining unrecognized compensation cost for those awards would be recognized prospectively over the remaining requisite service period. An entity that has an accounting policy to account for forfeitures when they occur in accordance with paragraph 718-10-35-3 would assume that the achievement of a service condition is probable when determining the amount of compensation cost to recognize unless the award has been forfeited.

718-10-55-77 As indicated in paragraph 718-10-55-75, the initial estimate of the requisite service period based on an explicit or implicit service period shall be adjusted for changes in the expected and actual outcomes of the related service or performance conditions that affect vesting of the award. Such adjustments will occur as the entity revises its estimates of whether or when different conditions or combinations of conditions are probable of being satisfied. Compensation cost ultimately recognized is equal to the grant-date fair value of the award based on the actual outcome of the performance or service conditions (see paragraph 718-10-30-15). If an award contains a market condition and a performance or a service condition and the initial estimate of the requisite service period is based on the market condition's derived service period, then the requisite service period shall not be revised unless either of the following criteria is met:

a. The market condition is satisfied before the end of the derived service period

b. Satisfying the market condition is no longer the basis for determining the requisite service period.

718-10-55-78 How a change to the initial estimate of the requisite service period is accounted for depends on whether that change would affect the grant-date fair value of the award (including the quantity of instruments) that is to be recognized as compensation. For example, if the quantity of instruments for which the requisite service is expected to be rendered changes because a vesting condition becomes probable of satisfaction or if the grant-date fair value of an instrument changes because another performance or service condition becomes probable of satisfaction (for example, a performance or service condition that affects exercise price becomes probable of satisfaction), the cumulative effect on current and prior periods of those changes in estimates shall be recognized in the period of the change. In contrast, if compensation cost is already being attributed over an initially estimated requisite service period and that initially estimated period changes solely because another market, performance, or service condition becomes the basis for the requisite service period, any unrecognized compensation cost at that date of change shall be recognized prospectively over the revised requisite service period, if any (that is, no cumulative-effect adjustment is recognized).

718-10-55-79 To summarize, changes in actual or estimated outcomes that affect either the grant-date fair value of the instrument awarded or the quantity of instruments for which the requisite service is expected to be rendered (or both) are accounted for using a cumulative effect adjustment, and changes in estimated requisite service periods for awards for which compensation cost is already being attributed are accounted for prospectively only over the revised requisite service period, if any.

> > Determination of Grant Date

718-10-55-80 This guidance expands on the guidance provided in paragraph 718-10-25-5.

718-10-55-81 The definition of grant date requires that an employer and employee have a mutual understanding of the key terms and conditions of the share-based compensation arrangement. Those terms may be established through any of the following:

a. A formal, written agreement

b. An informal, oral arrangement

c. An entity's past practice.

718-10-55-82 A mutual understanding of the key terms and conditions means that there is sufficient basis for both the employer and the employee to understand the nature of the relationship established by the award, including both the compensatory relationship and the equity relationship subsequent to the date of grant. The grant date for an award will be the date that an employee begins to benefit from, or be adversely affected by, subsequent changes in the price of the employer's equity shares. In order to assess that financial exposure, the employer and employee must agree to the terms; that is, there must be a mutual understanding. Awards made under an arrangement that is subject to shareholder approval are not deemed to be granted until that approval is obtained unless approval is essentially a formality (or perfunctory). Additionally, to have a grant date for an award to an employee, the recipient of that award must meet the definition of an **employee**.

718-10-55-83 The determination of the grant date shall be based on the relevant facts and circumstances. For instance, a look-back share option may be granted with an exercise price equal to the lower of the current share price or the share price one year hence. The ultimate exercise price is not known at the date of grant, but it cannot be greater than the current share price. In this case, the relationship between the exercise price and the current share price provides a sufficient basis to understand both the compensatory and equity relationship established by the award; the recipient begins to benefit from subsequent changes in the price of the employer's equity shares. However, if the award's terms call for the exercise price to be set equal to the share price one year hence, the recipient does not begin to benefit from, or be adversely affected by, changes in the price of the employer's equity shares until then. Therefore, grant date would not occur until one year hence. Awards of share options whose exercise price is determined solely by reference to a future share price generally would not provide a sufficient basis to understand the nature of the compensatory and equity relationships established by the award until the exercise price is known.

> > Classification of Certain Awards with Repurchase Features

718-10-55-84 The following paragraph further explains the guidance in paragraphs 718-10-25-9 through 25-12.

718-10-55-85 An entity may, for example, grant shares under a share-based compensation arrangement that the employee can put (sell) to the employer (the entity) shortly after the vesting date for cash equal to the fair value of the shares on the date of repurchase. That award of puttable shares would be classified as a liability because the repurchase feature permits the employee to avoid bearing the risks and rewards normally associated with equity share ownership for a reasonable period of time from the date the share is issued (see paragraph 718-10-25-9(a)). Alternatively, an entity might grant its own shares under a share-based compensation arrangement that may be put to the employer only after the employee has held them for a reasonable period of time after vesting but at a fixed redemption amount. Those puttable shares also would be classified as liabilities under the requirements of this Topic because the repurchase price is based on a fixed amount rather than variations in the fair value of the employer's shares. The employee cannot bear the risks and rewards normally associated with equity share ownership for a reasonable period of time because of that redemption feature. However, if a share with a repurchase feature gives the employee the right to sell shares back to the entity for a fixed amount over the fair value of the shares at the date of repurchase, paragraph 718-20-35-7 requires that the fixed amount over the fair value be recognized as additional compensation cost over the requisite service period (with a corresponding liability being accrued).

> > Identifying an Employee of a Physician Practice Management Entity

718-10-55-85A A physician practice management entity shall determine whether an employee of the physician practice is considered an employee of the physician practice management entity for purposes of determining the method of accounting for that person's share-based compensation as follows:

a. An employee of a physician practice that is consolidated by the physician practice management entity shall be considered an employee of the physician practice management entity and its subsidiaries.

b. An employee of a physician practice that is not consolidated by the physician practice management entity shall not be considered an employee of the physician practice management entity and its subsidiaries.

> Illustrations

> > Example 1: Estimating the Requisite Service Period

718-10-55-86 This Example illustrates the guidance in paragraphs 718-10-30-25 through 30-26.

718-10-55-87 Assume that Entity A uses a point system for retirement. An employee who accumulates 60 points becomes eligible to retire with certain benefits, including the retention of any nonvested share-based payment awards for their remaining contractual life, even if another explicit service condition has not been satisfied. In this case, the point system effectively accelerates vesting. On January 1, 20X5, an employee receives at-the-money options on 100 shares of Entity A's stock. All options vest at the end of 3 years of service and have a 10-year contractual term. At the grant date, the employee has 60 points and, therefore, is eligible to retire at any time.

718-10-55-88 Because the employee is eligible to retire at the grant date, the award's explicit service condition is nonsubstantive. Consequently, Entity A has granted an award that does not contain a performance or service condition for vesting, that is, the award is effectively vested, and thus, the award's entire fair value should be recognized as compensation cost on the grant date. All of the **terms of a share-based payment award** and other relevant facts and circumstances must be analyzed when determining the requisite service period.

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Because the employee is eligible to retire at the grant date, the award's explicit service condition is nonsubstantive. Consequently, Entity A has granted an award that does not contain a service condition for vesting, that is, the award is effectively vested, and thus, the award's entire fair value should be recognized as compensation cost on the grant date. All of the **terms of a share-based payment award** and other relevant facts and circumstances must be analyzed when determining the requisite service period.

> > Example 2: Definition of Employee

718-10-55-89 This Example illustrates the evaluation as to whether an individual meets conditions to be considered an **employee** under the definition of that term used in this Topic.

718-10-55-90 This Topic defines employee as an individual over whom the grantor of a share-based compensation award exercises or has the right to exercise sufficient control to establish an employer-employee relationship based on common law as illustrated in case law and currently under U.S. Internal Revenue Service (IRS) Revenue Ruling 87-41 . An example of whether that condition exists follows. Entity A issues options to members of its Advisory Board, which is separate and distinct from Entity A's board of directors. Members of the Advisory Board are knowledgeable about Entity A's industry and advise Entity A on matters such as policy development, strategic planning, and product development. The Advisory Board members are appointed for two-year terms and meet four times a year for one day, receiving a fixed number of options for services rendered at each meeting. Based on an evaluation of the relationship between Entity A and the Advisory Board members, Entity A concludes that the Advisory Board members do not meet the common law definition of employee. Accordingly, the awards to the Advisory Board members are accounted for as awards to nonemployees under the provisions of this Topic.

718-10-55-91 Nonemployee directors acting in their role as members of an entity's board of directors shall be treated as employees if those directors were elected by the entity's shareholders or appointed to a board position that will be filled by shareholder election when the existing term expires. However, that requirement applies only to awards granted to them for their services as directors. Awards granted to those individuals for other services shall be accounted for as awards to nonemployees in accordance with Section 505-50-25. Additionally, consolidated groups may have multiple boards of directors; this guidance applies only to either of the following:

a. The nonemployee directors acting in their role as members of a parent entity's board of directors

b. Nonemployee members of a consolidated subsidiary's board of directors to the extent that those members are elected by shareholders that are not controlled directly or indirectly by the parent or another member of the consolidated group.

> > Example 3: Share-Based Payment Award with a Performance Condition and Multiple Service Periods

718-10-55-92 The following Cases illustrate share-based payment awards with a performance condition (see paragraphs 718-10-25-20 through 25-21; 718-10-30-27; and 718-10-35-4) and multiple service dates:

a. Performance targets are set at the inception of the arrangement (Case A).

b. Performance targets are established at some time in the future (Case B).

c. Performance targets established up front but vesting is tied to the vesting of a preceding award (Case C).

718-10-55-93 Cases A, B, and C share the following assumptions:

a. On January 1, 20X5, Entity T enters into an arrangement with its chief executive officer relating to 40,000 share options on its stock with an exercise price of $30 per option.

b. The arrangement is structured such that 10,000 share options will vest or be forfeited in each of the next 4 years (20X5 through 20X8) depending on whether annual performance targets relating to Entity T's revenues and net income are achieved.

> > > Case A: Performance Targets Are Set at the Inception of the Arrangement

718-10-55-94 All of the annual performance targets are set at the inception of the arrangement. Because a mutual understanding of the key terms and conditions is reached on January 1, 20X5, each tranche would have a grant date and, therefore, a measurement date, of January 1, 20X5. However, each tranche of 10,000 share options should be accounted for as a separate award with its own service inception date, grant-date fair value, and 1-year requisite service period, because the arrangement specifies for each tranche an independent performance condition for a stated period of service. The chief executive officer's ability to retain (vest in) the award pertaining to 20X5 is not dependent on service beyond 20X5, and the failure to satisfy the performance condition in any one particular year has no effect on the outcome of any preceding or subsequent period. This arrangement is similar to an arrangement that would have provided a $10,000 cash bonus for each year for satisfaction of the same performance conditions. The four separate service inception dates (one for each tranche) are at the beginning of each year.

> > > Case B: Performance Targets Are Established at Some Time in the Future

718-10-55-95 If the arrangement had instead provided that the annual performance targets would be established during January of each year, the grant date (and, therefore, the measurement date) for each tranche would be that date in January of each year (20X5 through 20X8) because a mutual understanding of the key terms and conditions would not be reached until then. In that case, each tranche of 10,000 share options has its own service inception date, grant-date fair value, and 1-year requisite service period. The fair value measurement of compensation cost for each tranche would be affected because not all of the key terms and conditions of each award are known until the compensation committee sets the performance targets and, therefore, the grant dates are those dates.

> > > Case C: Performance Targets Established up Front but Vesting Is Tied to the Vesting of a Preceding Award

718-10-55-96 If the arrangement in Case A instead stated that the vesting for awards in periods from 20X6 through 20X8 was dependent on satisfaction of the performance targets related to the preceding award, the requisite service provided in exchange for each preceding award would not be independent of the requisite service provided in exchange for each successive award. In contrast to the arrangement described in Case A, failure to achieve the annual performance targets in 20X5 would result in forfeiture of all awards. The requisite service provided in exchange for each successive award is dependent on the requisite service provided for each preceding award. In that circumstance, all awards have the same service inception date and the same grant date (January 1, 20X5); however, each award has its own explicit service period (for example, the 20X5 grant has a one-year service period, the 20X6 grant has a two-year service period, and so on) over which compensation cost would be recognized. Because this award contains a performance condition, it is not subject to the attribution guidance in paragraph 718-10-35-8.

> > Example 4: Share-Based Payment Award with a Service Condition and Multiple Service Periods

718-10-55-97 The following Cases illustrate the guidance in paragraph 718-10-30-12 to determine the service period for awards with multiple service periods:

a. Exercise price established at subsequent dates (Case A)

b. Exercise price established at inception (Case B).

> > > Case A: Exercise Price Established at Subsequent Dates

718-10-55-98 The chief executive officer of Entity T enters into a five-year employment contract on January 1, 20X5. The contract stipulates that the chief executive officer will be given 10,000 fully vested share options at the end of each year (50,000 share options in total). The exercise price of each tranche will be equal to the market price at the date of issuance (December 31 of each year in the five-year contractual term). In this Case, there are five separate grant dates. The grant date for each tranche is December 31 of each year because that is the date when there is a mutual understanding of the key terms and conditions of the agreement—that is, the exercise price is known and the chief executive officer begins to benefit from, or be adversely affected by, subsequent changes in the price of the employer's equity shares (see paragraphs 718-10-55-80 through 55-83 for additional guidance on determining the grant date). Because the awards' terms do not include a substantive future requisite service condition that exists at the grant date (the options are fully vested when they are issued), and the exercise price (and, therefore, the grant date) is determined at the end of each period, the service inception date precedes the grant date. The requisite service provided in exchange for the first award (pertaining to 20X5) is independent of the requisite service provided in exchange for each consecutive award. The terms of the share-based compensation arrangement provide evidence that each tranche compensates the chief executive officer for one year of service, and each tranche shall be accounted for as a separate award with its own service inception date, grant date, and one-year service period; therefore, the provisions of paragraph 718-10-35-8 would not be applicable to this award because of its structure.

> > > Case B: Exercise Price Established at Inception

718-10-55-99 If the arrangement described in Case A provided instead that the exercise price for all 50,000 share options would be the January 1, 20X5, market price, then the grant date (and, therefore, the measurement date) for each tranche would be January 1, 20X5, because that is the date at which there is a mutual understanding of the key terms and conditions. All tranches would have the same service inception date and the same grant date (January 1, 20X5). Because of the nature of this award, Entity T would make a policy decision pursuant to paragraph 718-10-35-8 as to whether it considers the award as in-substance, multiple awards each with its own requisite service period (that is, the 20X5 grant has a one-year service period, the 20X6 grant has a two-year service period, and so on) or whether the entity considers the award as a single award with a single requisite service period based on the last separately vesting portion of the award (that is, a requisite service period of five years). Once chosen, this Topic requires that accounting policy be applied consistently to all similar awards.

> > Example 5: Share-Based Payment Award with Market and Service Conditions and Multiple Service Periods

718-10-55-100 The following Cases illustrate the guidance in paragraph 718-10-35-5 in circumstances in which an award includes both a market condition and a service condition:

a. When only one condition must be met (Case A)

b. When both conditions must be met (Case B).

718-10-55-101 Cases A and B share the following assumptions.

718-10-55-102 On January 1, 20X5, Entity T grants an executive 200,000 share options on its stock with an exercise price of $30 per option. The award specifies that vesting (or exercisability) will occur upon the earlier of the following for Case A or both are met for Case B:

a. The share price reaching and maintaining at least $70 per share for 30 consecutive trading days

b. The completion of eight years of service.

718-10-55-103 The award contains an explicit service period of eight years related to the service condition and a derived service period related to the market condition.

> > > Case A: When Only One Condition Must Be Met

718-10-55-104 An entity shall make its best estimate of the **derived service period** related to the market condition (see paragraph 718-10-55-71). The derived service period may be estimated using any reasonable methodology, including Monte Carlo simulation techniques. For this Case, the derived service period is assumed to be six years. As described in paragraphs 718-10-55-72 through 55-73, if an award's vesting (or exercisability) is conditional upon the achievement of either a market condition or performance or service conditions, the requisite service period is generally the shortest of the explicit, implicit, and derived service periods. In this Case, the requisite service period over which compensation cost would be attributed is six years (shorter of eight and six years). (An entity may grant a fully vested deep out-of-the-money share option that would lapse shortly after termination of service, which is the equivalent of an award with both a market condition and a service condition. The explicit service period associated with the explicit service condition is zero; however, because the option is deep out-of-the-money at the grant date, there would be a derived service period.)

718-10-55-105 Continuing with this Case, if the market condition is actually satisfied in February 20X9 (based on market prices for the prior 30 consecutive trading days), Entity T would immediately recognize any unrecognized compensation cost because no further service is required to earn the award. If the market condition is not satisfied as of that date but the executive renders the six years of requisite service, compensation cost shall not be reversed under any circumstances.

> > > Case B: When Both the Market and Service Condition Must Be Met

718-10-55-106 The initial estimate of the requisite service period for an award requiring satisfaction of both market and performance or service conditions is generally the longest of the explicit, implicit, and derived service periods (see paragraphs 718-10-55-72 through 55-73). For example, if the award described in Case A required both the completion of 8 years of service and the share price reaching and maintaining at least $70 per share for 30 consecutive trading days, compensation cost would be recognized over the 8-year explicit service period. If the employee were to terminate service prior to the eight-year requisite service period, compensation cost would be reversed even if the market condition had been satisfied by that time.

> > Example 6: Service Inception Date and Grant Date

718-10-55-107 The following Example illustrates the guidance in paragraph 718-10-35-6.

718-10-55-108 This Topic distinguishes between **service inception date** and **grant date**. The service inception date is the date at which the requisite service period begins. The service inception date usually is the grant date, but the service inception date precedes the grant date if all of the following criteria are met:

a. An award is authorized. (Compensation cost would not be recognized before receiving all necessary approvals unless approval is essentially a formality [or perfunctory].)

b. Service begins before a mutual understanding of the key terms and conditions of a share-based payment award is reached.

c. Either of the following conditions applies:

   1. The award's terms do not include a substantive future requisite service condition that exists at the grant date (see paragraph 718-10-55-113 for an example illustrating that condition).

   2. The award contains a market or performance condition that if not satisfied during the service period preceding the grant date and following the inception of the arrangement results in forfeiture of the award (see paragraph 718-10-55-114 for an example illustrating that condition).

718-10-55-109 In certain circumstances the service inception date may begin after the grant date (see paragraphs 718-10-55-93 through 55-94 for an example illustrating that circumstance).

718-10-55-110 For example, Entity T offers a position to an individual on April 1, 20X5, that has been approved by the chief executive officer and board of directors. In addition to salary and other benefits, Entity T offers to grant 10,000 shares of Entity T stock that vest upon the completion of 5 years of service (the market price of Entity T's stock is $25 on April 1, 20X5). The share award will begin vesting on the date the offer is accepted. The individual accepts the offer on April 2, 20X5, but is unable to begin providing services to Entity T until June 2, 20X5 (that is, substantive employment begins on June 2, 20X5). The individual also does not receive a salary or participate in other employee benefits until June 2, 20X5. On June 2, 20X5, the market price of Entity T stock is $40. In this Example, the service inception date is June 2, 20X5, the first date that the individual begins providing substantive employee services to Entity T. The grant date is the same date because that is when the individual would meet the definition of an employee. The grant-date fair value of the share award is $400,000 (10,000 × $40).

718-10-55-111 If necessary board approval of the award described in the preceding paragraph was obtained on August 5, 20X5, two months after substantive employment begins (June 2, 20X5), both the service inception date and the grant date would be August 5, 20X5, as that is the date when all necessary authorizations were obtained. If the market price of Entity T's stock was $38 per share on August 5, 20X5, the grant-date fair value of the share award would be $380,000 (10,000 × $38). Additionally, Entity T would not recognize compensation cost for the shares for the period between June 2, 20X5, and August 4, 20X5, neither during that period nor cumulatively on August 5, 20X5, when both the service inception date and the grant date occur. This is consistent with the definition of requisite service period, which states that if an award requires future service for vesting, the entity cannot define a prior period as the requisite service period. Future service in this context represents the service to be rendered beginning as of the service inception date.

718-10-55-112 If the service inception date precedes the grant date, recognition of compensation cost for periods before the grant date shall be based on the fair value of the award at the reporting dates that occur before the grant date. In the period in which the grant date occurs, cumulative compensation cost shall be adjusted to reflect the cumulative effect of measuring compensation cost based on the fair value at the grant date rather than the fair value previously used at the service inception date (or any subsequent reporting dates) (see paragraph 718-10-35-6).

718-10-55-113 If an award's terms do not include a substantive future requisite service condition that exists at the grant date, the service inception date can precede the grant date. For example, on January 1, 20X5, an employee is informed that an award of 100 fully vested options will be made on January 1, 20X6, with an exercise price equal to the share price on January 1, 20X6. All approvals for that award have been obtained as of January 1, 20X5. That individual is still an employee on January 1, 20X6, and receives the 100 fully vested options on that date. There is no substantive future service period associated with the options after January 1, 20X6. Therefore, the requisite service period is from the January 1, 20X5, service inception date through the January 1, 20X6, grant date, as that is the period during which the employee is required to perform service in exchange for the award. The relationship between the exercise price and the current share price that provides a sufficient basis to understand the equity relationship established by the award is known on January 1, 20X6. Compensation cost would be recognized during 20X5 in accordance with the preceding paragraph.

718-10-55-114 If an award contains either a market or a performance condition, which if not satisfied during the service period preceding the grant date and following the date the award is given results in a forfeiture of the award, then the service inception date may precede the grant date. For example, an authorized award is given on January 1, 20X5, with a two-year cliff vesting service requirement commencing on that date. The exercise price will be set on January 1, 20X6. The award will be forfeited if Entity T does not sell 1,000 units of product X in 20X5. In this Example, the employee earns the right to retain the award if the performance condition is met and the employee renders service in 20X5 and 20X6. The requisite service period is two years beginning on January 1, 20X5. The service inception date (January 1, 20X5) precedes the grant date (January 1, 20X6). Compensation cost would be recognized during 20X5 in accordance with paragraph 718-10-55-112.

718-10-55-115 In contrast, consider an award that is given on January 1, 20X5, with only a three-year cliff vesting explicit service condition, which commences on that date. The exercise price will be set on January 1, 20X6. In this Example, the service inception date cannot precede the grant date because there is a substantive future requisite service condition that exists at the grant date (two years of service). Therefore, there would be no attribution of compensation cost for the period between January 1, 20X5, and December 31, 20X5, neither during that period nor cumulatively on January 1, 20X6, when both the service inception date and the grant date occur. This is consistent with the definition of requisite service period, which states that if an award requires future service for vesting, the entity cannot define a prior period as the requisite service period. The requisite service period would be two years, commencing on January 1, 20X6.

> > Example 7: Tandem Awards

718-10-55-116 A **tandem award** is an award with two or more components in which exercise of one part cancels the other(s). In contrast, a **combination award** is an award with two or more separate components, all of which can be exercised. The following Cases illustrates one aspect of the guidance in paragraph 718-10-25-15:

a. Share option or cash settled stock appreciation rights (Case A)
b. Phantom shares or share options (Case B).

> > > Case A: Share Option or Cash Settled Stock Appreciation Rights

718-10-55-117 This Case illustrates the accounting for a tandem award in which employees have a choice of either share options or cash-settled stock appreciation rights. Entity T grants to its employees an award of 900,000 share options or 900,000 cash-settled stock appreciation rights on January 1, 20X5. The award vests on December 31, 20X7, and has a contractual life of 10 years. If an employee exercises the stock appreciation rights, the related share options are cancelled. Conversely, if an employee exercises the share options, the related stock appreciation rights are cancelled.

718-10-55-118 The tandem award results in Entity T's incurring a liability because the employees can demand settlement in cash. If Entity T could choose whether to settle the award in cash or by issuing stock, the award would be an equity instrument unless Entity T's predominant past practice is to settle most awards in cash or to settle awards in cash whenever requested to do so by the employee, indicating that Entity T has incurred a substantive liability as indicated in paragraph 718-10-25-15. In this Case, however, Entity T incurs a liability to pay cash, which it will recognize over the requisite service period. The amount of the liability will be adjusted each year to reflect changes in its fair value. If employees choose to exercise the share options rather than the stock appreciation rights, the liability is settled by issuing stock.

718-10-55-119 The fair value of the stock appreciation rights at the grant date is $12,066,454, as computed in Example 1 (see paragraph 718-30-55-1), because the value of the stock appreciation rights and the value of the share options are equal. Accordingly, at the end of 20X5, when the assumed fair value per stock appreciation right is $10, the amount of the liability is $8,214,060 (821,406 cash-settled stock appreciation rights expected to vest × $10). One-third of that amount, $2,738,020, is recognized as compensation cost for 20X5. At the end of each year during the vesting period, the liability is remeasured to its fair value for all stock appreciation rights expected to vest. After the vesting period, the liability for all outstanding vested awards is remeasured through the date of settlement.

> > > Case B: Phantom Shares or Share Options

718-10-55-120 This Case illustrates a tandem award in which the components have different values after the grant date, depending on movements in the price of the entity's stock. The employee's choice of which component to exercise will depend on the relative values of the components when the award is exercised.

718-10-55-121 Entity T grants to its chief executive officer an immediately vested award consisting of the following two parts:

a. 1,000 phantom share units (units) whose value is always equal to the value of 1,000 shares of Entity T's common stock
b. Share options on 3,000 shares of Entity T's stock with an exercise price of $30 per share.

718-10-55-122 At the grant date, Entity T's share price is $30 per share. The chief executive officer may choose whether to exercise the share options or to cash in the units at any time during the next five years. Exercise of all of the share options cancels all of the units, and cashing in all of the units cancels all of the share options. The cash value of the units will be paid to the chief executive officer at the end of five years if the share option component of the tandem award is not exercised before then.

718-10-55-123 With a 3-to-1 ratio of share options to units, exercise of 3 share options will produce a higher gain than receipt of cash equal to the value of 1 share of stock if the share price appreciates from the grant date by more than 50 percent. Below that point, one unit is more valuable than the gain on three share options. To illustrate that relationship, the results if the share price increases 50 percent to $45 are as follows.

	Units		Exercise of Options	
Market value	$45,000	($45 × 1,000)	$ 135,000	($45 × 3,000)
Purchase price	-		90,000	($30 × 3,000)
Net cash value	$45,000		$ 45,000	

718-10-55-124 If the price of Entity T's common stock increases to $45 per share from its price of $30 at the grant date, each part of the tandem grant will produce the same net cash payment (ignoring transaction costs) to the chief executive officer. If the price increases to $44, the value of 1 share of stock exceeds the gain on exercising 3 share options, which would be $42 [3 × ($44–$30)]. But if the price increases to $46, the gain on exercising 3 share options, $48 [3 × ($46–$30)], exceeds the value of 1 share of stock.

718-10-55-125 At the grant date, the chief executive officer could take $30,000 cash for the units and forfeit the share options. Therefore, the total value of the award at the grant date must exceed $30,000 because at share prices above $45, the chief executive officer receives a higher amount than would the holder of 1 share of stock. To exercise the 3,000 options, the chief executive officer must forfeit the equivalent of 1,000 shares of stock, in addition to paying the total exercise price of $90,000 (3,000 × $30). In effect, the chief executive officer receives only 2,000 shares of Entity T stock upon exercise. That is the same as if the share option component of the tandem award consisted of share options to purchase 2,000 shares of stock for $45 per share.

718-10-55-126 The cash payment obligation associated with the units qualifies the award as a liability of Entity T. The maximum amount of that liability, which is indexed to the price of Entity T's common stock, is $45,000 because at share prices above $45, the chief executive officer will exercise the share options.

718-10-55-127 In measuring compensation cost, the award may be thought of as a combination —not tandem—grant of both of the following:

a. 1,000 units with a value at grant of $30,000
b. 2,000 options with a strike price of $45 per share.

718-10-55-128 Compensation cost is measured based on the combined value of the two parts.

718-10-55-129 The fair value per share option with an exercise price of $45 is assumed to be $10. Therefore, the total value of the award at the grant date is as follows.

Units (1,000 × $30)	$30,000
Share options (2,000 × $10)	20,000
Value of award	$50,000

718-10-55-130 Therefore, compensation cost recognized at the date of grant (the award is immediately vested) would be $30,000 with a corresponding credit to a share-based compensation liability of $30,000. However, because the share option component is the substantive equivalent of 2,000 deep out-of-the-money options, it contains a derived service period (assumed to be 2 years). Hence, compensation cost for the share option component of $20,000 would be recognized over the requisite service period. The share option component would not be remeasured because it is not a liability. That total amount of both components (or $50,000) is more than either of the components by itself, but less than the total amount if both components (1,000 units and 3,000 share options with an exercise price of $30) were exercisable. Because granting the units creates a liability, changes in the liability that result from increases or decreases in the price of Entity T's share price would be recognized each period until exercise, except that the amount of the liability would not exceed $45,000.

> > Example 8: Book Value Plans

718-10-55-131 A nonpublic entity that is not a Securities and Exchange Commission (SEC) registrant has two classes of stock. Class A is voting and held only by the members of the founding family, and Class B (book value shares) is nonvoting and held only by employees. The purchase price of Class B shares is a formula price based on book value. Class B shares require that the employee, six months after retirement or separation from the entity, sell the shares back to the entity for cash at a price determined by using the same formula used to establish the purchase price. Class B shares may not be required to be accounted for as liabilities pursuant to Topic 480 because the entity is a nonpublic entity that is not an SEC registrant. Nevertheless, Class B shares may be classified as liabilities if they are granted as part of a share-based payment transaction and those shares contain certain repurchase features meeting criteria in paragraph 718-10-25-9; this Example assumes that Class B shares do not meet those criteria. Because book value shares of public entities generally are not indexed to their stock prices, such shares would be classified as liabilities pursuant to this Topic.

718-10-55-132 Determining whether a transaction involving Class B shares is compensatory will depend on the terms of the arrangement. For instance, if an employee acquires 100 shares of Class B stock in exchange for cash equal to the formula price of those shares, the transaction is not compensatory because the employee has acquired those shares on the same terms available to all other Class B shareholders and at the current formula price based on the current book value. Subsequent changes in the formula price of those shares held by the employee are not deemed compensation for services.

718-10-55-133 However, if an employee acquires 100 shares of Class B stock in exchange for cash equal to 50 percent of the formula price of those shares, the transaction is compensatory because the employee is not paying the current formula price. Therefore, the value of the 50 percent discount should be attributed over the requisite service period. However, subsequent changes in the formula price of those shares held by the employee are not compensatory.

> > Example 9: Disclosure

718-10-55-134 This Example illustrates disclosures (see paragraphs 718-10-50-1 through 50-2) of a public entity's share-based compensation arrangements. The illustration assumes that compensation cost has been recognized in accordance with this Topic for several years. The amount of compensation cost recognized each year includes both costs from that year's grants and costs from prior years' grants. The number of options outstanding, exercised, forfeited, or expired each year includes options granted in prior years.

718-10-55-135 On December 31, 20Y1, the Entity has two share-based compensation plans: The compensation cost that has been charged against income for those plans was $29.4 million, $28.7 million, and $23.3 million for 20Y1, 20Y0, and 20X9, respectively. The total income tax benefit recognized in the income statement for share-based compensation arrangements was $10.3 million, $10.1 million, and $8.2 million for 20Y1, 20Y0, and 20X9, respectively. Compensation cost capitalized as part of inventory and fixed assets for 20Y1, 20Y0, and 20X9 was $0.5 million, $0.2 million, and $0.4 million, respectively.

> > > Case A: Share Option Plan

718-10-55-136 The following illustrates disclosure for a share option plan.

The Entity's 20X4 employee share option plan, which is shareholder-approved, permits the grant of share options and shares to its employees for up to 8 million shares of common stock. Entity A believes that such awards better align the interests of its employees with those of its shareholders. Option awards are generally granted with an exercise price equal to the market price of Entity A's stock at the date of grant; those option awards generally vest based on 5 years of continuous service and have 10-year contractual terms. Share awards generally vest over five years. Certain option and share awards provide for accelerated vesting if there is a change in control (as defined in the employee share option plan).

The fair value of each option award is estimated on the date of grant using a lattice-based option valuation model that uses the assumptions noted in the following table. Because lattice-based option valuation models incorporate ranges of assumptions for inputs, those ranges are disclosed. Expected volatilities are based on implied volatilities from traded options on Entity A's stock, historical volatility of Entity A's stock, and other factors. Entity A uses historical data to estimate option exercise and employee termination within the valuation model; separate groups of employees that have similar historical exercise behavior are considered separately for valuation purposes. The expected term of options granted is derived from the output of the option valuation model and represents the period of time that options granted are expected to be outstanding; the range given below results from certain groups of employees exhibiting different behavior. The risk-free rate for periods within the contractual life of the option is based on the U.S. Treasury yield curve in effect at the time of grant.

	20Y1	20Y0	20X9
Expected volatility	25%–40%	24%–38%	20%–30%
Weighted-average volatility	33%	30%	27%
Expected dividends	1.5%	1.5%	1.5%
Expected term (in years)	5.3–7.8	5.5–8.0	5.6–8.2
Risk-free rate	6.3%–11.2%	6.0%–10.0%	5.5%–9.0%

A summary of option activity under the employee share option plan as of December 31, 20Y1, and changes during the year then ended is presented below.

Options	Shares (000)	Weighted-Average Exercise Price	Weighted-Average Remaining Contractual Term	Aggregate Intrinsic Value ($000)
Outstanding at January 1, 20Y1	4,660	$ 42		
Granted	950	60		
Exercised	(800)	36		
Forfeited or expired	(80)	59		
Outstanding at December 31, 20Y1	4,730	$ 47	6.5	$ 85,140
Exercisable at December 31, 20Y1	3,159	$ 41	4.0	$ 75,816

The weighted-average grant-date fair value of options granted during the years 20Y1, 20Y0, and 20X9 was $19.57, $17.46, and $15.90, respectively. The total intrinsic value of options exercised during the years ended December 31, 20Y1, 20Y0, and 20X9, was $25.2 million, $20.9 million, and $18.1 million, respectively.

A summary of the status of Entity A's nonvested shares as of December 31, 20Y1, and changes during the year ended December 31, 20Y1, is presented below.

Nonvested Shares	Shares (000)	Weighted-Average Grant-Date Fair Value
Nonvested at January 1, 20Y1	980	$ 40.00
Granted	150	63.50
Vested	(100)	35.75
Forfeited	(40)	55.25
Nonvested at December 31, 20Y1	990	$ 43.35

As of December 31, 20Y1, there was $25.9 million of total unrecognized compensation cost related to nonvested share-based compensation arrangements granted under the employee share option plan. That cost is expected to be recognized over a weighted-average period of 4.9 years. The total fair value of shares vested during the years ended December 31, 20Y1, 20Y0, and 20X9, was $22.8 million, $21 million, and $20.7 million, respectively.

During 20Y1, Entity A extended the contractual life of 200,000 fully vested share options held by 10 employees. As a result of that modification, the Entity recognized additional compensation expense of $1.0 million for the year ended December 31, 20Y1.

> > > Case B: Performance Share Option Plan

718-10-55-137 The following illustrates disclosure for a performance share option plan.

Under its 20X7 performance share option plan, which is shareholder-approved, each January 1 Entity A grants selected executives and other key employees share option awards whose vesting is contingent upon meeting various departmental and company-wide performance goals, including decreasing time to market for new products, revenue growth in excess of an index of competitors' revenue growth, and sales targets for Segment X. Share options under the performance share option plan are generally granted at-the-money, contingently vest over a period of 1 to 5 years, depending on the nature of the performance goal, and have contractual lives of 7 to 10 years. The number of shares subject to options available for issuance under this plan cannot exceed 5 million.

The fair value of each option grant under the performance share option plan was estimated on the date of grant using the same option valuation model used for options granted under the employee share option plan and assumes that performance goals will be achieved. If such goals are not met, no compensation cost is recognized and any recognized compensation cost is reversed. The inputs for expected volatility, expected dividends, and risk-free rate used in estimating those options' fair value are the same as those noted in the table related to options issued under the employee share option plan. The expected term for options granted under the performance share option plan in 20Y1, 20Y0, and 20X9 is 3.3 to 5.4 years, 2.4 to 6.5 years, and 2.5 to 5.3 years, respectively.

A summary of the activity under the performance share option plan as of December 31, 20Y1, and changes during the year then ended is presented below.

Performance Options	Shares (000)	Weighted-Average Exercise Price	Weighted-Average Remaining Contractual Term	Aggregate Intrinsic Value ($000)
Outstanding at January 1, 20Y1	2,533	$ 44		
Granted	995	60		
Exercised	(100)	36		
Forfeited	(604)	59		
Outstanding at December 31, 20Y1	2,824	$ 47	7.1	$ 50,832
Exercisable at December 31, 20Y1	936	$ 40	5.3	$ 23,400

The weighted-average grant-date fair value of options granted during the years 20Y1, 20Y0, and 20X9 was $17.32, $16.05, and $14.25, respectively. The total intrinsic value of options exercised during the years ended December 31, 20Y1, 20Y0, and 20X9, was $5 million, $8 million, and $3 million, respectively. As of December 31, 20Y1, there was $16.9 million of total unrecognized compensation cost related to nonvested share-based compensation arrangements granted under the performance share option plan; that cost is expected to be recognized over a period of 4 years.

Cash received from option exercise under all share-based payment arrangements for the years ended December 31, 20Y1, 20Y0, and 20X9, was $32.4 million, $28.9 million, and $18.9 million, respectively. The actual tax benefit realized for the tax deductions from option exercise of the share-based payment arrangements totaled $11.3 million, $10.1 million, and $6.6 million, respectively, for the years ended December 31, 20Y1, 20Y0, and 20X9.

Entity A has a policy of repurchasing shares on the open market to satisfy share option exercises and expects to repurchase approximately 1 million shares during 20Y2, based on estimates of option exercises for that period.

Pending Content:

Transition Date: *(P) December 16, 2016; (N) December 16, 2017* | **Transition Guidance:** 718-10-65-4

The following illustrates disclosure for a performance share option plan.

Under its 20X7 performance share option plan, which is shareholder-approved, each January 1 Entity A grants selected executives and other key employees share option awards whose vesting is contingent upon meeting various departmental and company-wide performance goals, including decreasing time to market for new products, revenue growth in excess of an index of competitors' revenue growth, and sales targets for Segment X. Share options under the performance share option plan are generally granted at-the-money, contingently vest over a period of 1 to 5 years, depending on the nature of the performance goal, and have contractual lives of 7 to 10 years. The number of shares subject to options available for issuance under this plan cannot exceed 5 million.

The fair value of each option grant under the performance share option plan was estimated on the date of grant using the same option valuation model used for options granted under the employee share option plan and assumes that performance goals will be achieved. If such goals are not met, no compensation cost is recognized and any recognized compensation cost is reversed. The inputs for expected volatility, expected dividends, and risk-free rate used in estimating those options' fair value are the same as those noted in the table related to options issued under the employee share option plan. The expected term for options granted under the performance share option plan in 20Y1, 20Y0, and 20X9 is 3.3 to 5.4 years, 2.4 to 6.5 years, and 2.5 to 5.3 years, respectively.

A summary of the activity under the performance share option plan as of December 31, 20Y1, and changes during the year then ended is presented below.

Performance Options	Shares (000)	Weighted-Average Exercise Price	Weighted-Average Remaining Contractual Term	Aggregate Intrinsic Value ($000)
Outstanding at January 1, 20Y1	2,533	$ 44		
Granted	995	60		
Exercised	(100)	36		
Forfeited	(604)	59		
Outstanding at December 31, 20Y1	2,824	$ 47	7.1	$ 50,832
Exercisable at December 31, 20Y1	936	$ 40	5.3	$ 23,400

The weighted-average grant-date fair value of options granted during the years 20Y1, 20Y0, and 20X9 was $17.32, $16.05, and $14.25, respectively. The total intrinsic value of options exercised during the years ended December 31, 20Y1, 20Y0, and 20X9, was $5 million, $8 million, and $3 million, respectively. As of December 31, 20Y1, there was $16.9 million of total unrecognized compensation cost related to nonvested share-based compensation arrangements granted under the performance share option plan; that cost is expected to be recognized over a period of 4 years.

Cash received from option exercise under all share-based payment arrangements for the years ended December 31, 20Y1, 20Y0, and 20X9, was $32.4 million, $28.9 million, and $18.9 million, respectively. The actual tax benefit for the tax deductions from option exercise of the share-based payment arrangements totaled $11.3 million, $10.1 million, and $6.6 million, respectively, for the years ended December 31, 20Y1, 20Y0, and 20X9.

Entity A has a policy of repurchasing shares on the open market to satisfy share option exercises and expects to repurchase approximately 1 million shares during 20Y2, based on estimates of option exercises for that period.

718-10-60 Relationships

General Note: The Relationships Section contains links to guidance that may be helpful to, but not required by, a user of the Subtopic. This Section may not be all-inclusive. The relationship items are organized according to the Topic structure in the Codification.

General

> Equity

718-10-60-1 For guidance related to an investor providing stock compensation on behalf of an investee, see paragraph 505-10-25-3 for investee accounting.

> Business Combinations

718-10-60-1A For guidance on accounting for contractual termination benefits and curtailment losses under employee benefit plans that will be triggered by the consummation of a business combination, see paragraphs 805-20-55-50 through 55-51.

> Derivatives and Hedging

718-10-60-1B For guidance related to equity-linked financial instruments issued to investors for purposes of establishing a market-based measure of the grant-date fair value of employee stock options, see paragraph 815-40-15-5A.

718-10-60-2 For guidance related to stock options in an unrelated entity given to **employees**, see paragraphs 815-10-55-46 through 55-48.

718-10-65 Transition and Open Effective Date Information

General Note: The Transition Section contains a description of the required transition provisions and a list of the related paragraphs that have been modified. This Section will retain the transition content during the transition period. After the transition period, the transition content will be removed yet will be available in archived versions of the Section.

General

718-10-65-1 Paragraph superseded on 03/30/2016 by Accounting Standards Update No. 2016-09, *Compensation—Stock Compensation (Topic 718): Improvements to Employee Share-Based Payment Accounting*.

718-10-65-2 Paragraph superseded on 06/18/2012 after the end of the transition period stated in Accounting Standards Update No. 2010-13, *Compensation—Stock Compensation (Topic 718): Effect of Denominating the Exercise Price of a Share-Based Payment Award in the Currency of the Market in Which the Underlying Equity Security Trades*.

> Transition Related to Accounting Standards Update No. 2014-12, Compensation—Stock Compensation (Topic 718): Accounting for Share-Based Payments When the Terms of an Award Provide That a Performance Target Could Be Achieved after the Requisite Service Period

718-10-65-3 The following represents the transition and effective date information related to Accounting Standards Update No. 2014-12, *Compensation—Stock Compensation (Topic 718): Accounting for Share-Based Payments When the Terms of an Award Provide That a Performance Target Could Be Achieved after the Requisite Service Period:*

a. The pending content that links to this paragraph shall be effective for annual periods and interim periods within those annual periods, beginning after December 15, 2015.
b. The pending content that links to this paragraph may be applied prospectively to all share-based payment awards that are granted or modified on or after the effective date.
c. The pending content that links to this paragraph also may be applied retrospectively to all awards with performance targets that are outstanding as of the beginning of the earliest annual period presented in the financial statements and to all new or modified awards thereafter. If retrospective transition is adopted, the cumulative effect of applying the pending content that links to this paragraph as of the beginning of the earliest annual period presented in the financial statements shall be recognized as an adjustment to the opening retained earnings balance at that date. Additionally, if retrospective transition is adopted, the use of hindsight is permitted in the measurement and recognition of compensation cost.
d. Earlier application of the pending content that links to this paragraph is permitted.
e. An entity shall provide the disclosures in paragraphs 250-10-50-1 through 50-3 in the period the entity adopts the pending content that links to this paragraph.

> Transition Related to Accounting Standards Update No. 2016-09, Compensation—Stock Compensation (Topic 718): Improvements to Employee Share-Based Payment Accounting

718-10-65-4 The following represents the transition and effective date information related to Accounting Standards Update No. 2016-09, *Compensation—Stock Compensation (Topic 718): Improvements to Employee Share-Based Payment Accounting:*

a. The pending content that links to this paragraph shall be effective for **public business entities** for fiscal years beginning after December 15, 2016, including interim periods within those fiscal years.

b. The pending content that links to this paragraph shall be effective for all other entities for fiscal years beginning after December 15, 2017, and interim periods within fiscal years beginning after December 15, 2018.

c. Earlier application of the pending content that links to this paragraph is permitted for:

1. Public business entities for reporting periods for which financial statements have not yet been issued

2. All other entities for reporting periods for which financial statements have not yet been made available for issuance.

d. An entity that elects earlier application of the pending content that links to this paragraph in an interim period shall reflect any adjustments as of the beginning of the annual period that includes that interim period.

e. An entity shall apply the pending content that links to this paragraph as follows:

1. On a prospective basis for the tax effects of differences recognized on or after the effective date between the deduction for an award for tax purposes and the cumulative compensation costs of that award recognized for financial reporting purposes. For purposes of computing diluted earnings per share, an entity also shall apply the pending content that links to this paragraph to the assumed proceeds of the treasury stock method on a prospective basis.

2. On a modified retrospective basis through a cumulative-effect adjustment to retained earnings as of the beginning of the period in which the pending content that links to this paragraph is effective for all tax benefits that were not previously recognized because the related tax deduction had not reduced taxes payable. Deferred tax assets recognized as a result of this transition guidance shall be assessed for realizability in accordance with Topic 740 on income taxes. A valuation allowance recognized for deferred tax assets recognized as a result of this transition guidance shall be recognized through a cumulative-effect adjustment to retained earnings.

f. An entity shall apply the pending content that links to this paragraph in the same period in which it applies the pending content that links to paragraphs 718-10-65-5 through 65-10.

g. In the first interim and annual period of adoption, an entity shall disclose both of the following:

1. The nature of and reason for the change in accounting principle

2. The cumulative effect of the change on retained earnings or other components of equity or net assets in the statement of financial position as of the beginning of the period of adoption.

> Transition Related to Accounting Standards Update No. 2016-09, Compensation—Stock Compensation (Topic 718): Improvements to Employee Share-Based Payment Accounting

718-10-65-5 The following represents the transition and effective date information related to Accounting Standards Update No. 2016-09, *Compensation—Stock Compensation (Topic 718): Improvements to Employee Share-Based Payment Accounting:*

a. The pending content that links to this paragraph shall be effective for **public business entities** for fiscal years beginning after December 15, 2016, including interim periods within those fiscal years.

b. The pending content that links to this paragraph shall be effective for all other entities for fiscal years beginning after December 15, 2017, and interim periods within fiscal years beginning after December 15, 2018.

c. Earlier application of the pending content that links to this paragraph is permitted for:

1. Public business entities for reporting periods for which financial statements have not yet been issued
2. All other entities for reporting periods for which financial statements have not yet been made available for issuance.

d. An entity that elects earlier application of the pending content that links to this paragraph in an interim period shall reflect any adjustments as of the beginning of the annual period that includes that interim period.

e. An entity shall apply the pending content that links to this paragraph in one of the following two ways:

1. Prospectively
2. Retrospectively to all periods presented.

f. An entity shall apply the pending content that links to this paragraph in the same period in which it applies the pending content that links to paragraphs 718-10-65-4 and 718-10-65-6 through 65-10.

g. In the first interim and annual period of adoption, an entity shall disclose the nature of and reason for the change in accounting principle.

1. An entity that elects to apply the pending content that links to this paragraph prospectively shall disclose that prior periods have not been adjusted.
2. An entity that elects to apply the pending content that links to this paragraph retrospectively shall disclose the effect of the change on prior periods retrospectively adjusted.

> Transition Related to Accounting Standards Update No. 2016-09, Compensation—Stock Compensation (Topic 718): Improvements to Employee Share-Based Payment Accounting

718-10-65-6 The following represents the transition and effective date information related to Accounting Standards Update No. 2016-09, *Compensation—Stock Compensation (Topic 718): Improvements to Employee Share-Based Payment Accounting:*

a. The pending content that links to this paragraph shall be effective for **public business entities** for fiscal years beginning after December 15, 2016, including interim periods within those fiscal years.

b. The pending content that links to this paragraph shall be effective for all other entities for fiscal years beginning after December 15, 2017, and interim periods within fiscal years beginning after December 15, 2018.

c. Earlier application of the pending content that links to this paragraph is permitted for:

1. Public business entities for reporting periods for which financial statements have not yet been issued
2. All other entities for reporting periods for which financial statements have not yet been made available for issuance.

d. An entity that elects earlier application of the pending content that links to this paragraph in an interim period shall reflect any adjustments as of the beginning of the annual period that includes that interim period.

e. An entity shall apply the pending content that links to this paragraph on a modified retrospective basis through a cumulative-effect adjustment to retained earnings as of the beginning of the period in which the pending content that is linked to this paragraph is effective.

f. An entity shall apply the pending content that links to this paragraph in the same period in which it applies the pending content that links to paragraphs 718-10-65-4 through 65-5 and 718-10-65-7 through 65-10.

g. In the first interim and annual period of adoption, an entity shall disclose both of the following:

1. The nature of and reason for the change in accounting principle
2. The cumulative effect of the change on retained earnings or other components of equity or net assets in the statement of financial position as of the beginning of the period of adoption.

> Transition Related to Accounting Standards Update No. 2016-09, Compensation—Stock Compensation (Topic 718): Improvements to Employee Share-Based Payment Accounting

718-10-65-7 The following represents the transition and effective date information related to Accounting Standards Update No. 2016-09, *Compensation—Stock Compensation (Topic 718): Improvements to Employee Share-Based Payment Accounting:*

a. The pending content that links to this paragraph shall be effective for **public business entities** for fiscal years beginning after December 15, 2016, including interim periods within those fiscal years.

b. The pending content that links to this paragraph shall be effective for all other entities for fiscal years beginning after December 15, 2017, and interim periods within fiscal years beginning after December 15, 2018.

c. Earlier application of the pending content that links to this paragraph is permitted for:

1. Public business entities for reporting periods for which financial statements have not yet been issued
2. All other entities for reporting periods for which financial statements have not yet been made available for issuance.

d. An entity that elects earlier application of the pending content that links to this paragraph in an interim period shall reflect any adjustments as of the beginning of the annual period that includes that interim period.

e. An entity shall apply the pending content that links to this paragraph on a modified retrospective basis through a cumulative-effect adjustment to retained earnings as of the beginning of the period in which the pending content that links to this paragraph is effective. When determining the cumulative-effect adjustment, an entity shall assess only liability classified awards that have not been settled by the effective date.

f. An entity shall apply the pending content that links to this paragraph in the same period in which it applies the pending content that links to paragraphs 718-10-65-4 through 65-6 and 718-10-65-8 through 65-10.

g. In the first interim and annual period of adoption, an entity shall disclose:

1. The nature of and reason for the change in accounting principle

2. The cumulative effect of the change on retained earnings or other components of equity or net assets in the statement of financial position as of the beginning of the period of adoption.

> Transition Related to Accounting Standards Update No. 2016-09, Compensation—Stock Compensation (Topic 718): Improvements to Employee Share-Based Payment Accounting

718-10-65-8 The following represents the transition and effective date information related to Accounting Standards Update No. 2016-09, *Compensation—Stock Compensation (Topic 718): Improvements to Employee Share-Based Payment Accounting:*

a. The pending content that links to this paragraph shall be effective for **public business entities** for fiscal years beginning after December 15, 2016, including interim periods within those fiscal years.

b. The pending content that links to this paragraph shall be effective for all other entities for fiscal years beginning after December 15, 2017, and interim periods within fiscal years beginning after December 15, 2018.

c. Earlier application of the pending content that links to this paragraph is permitted for:

1. Public business entities for reporting periods for which financial statements have not yet been issued

2. All other entities for reporting periods for which financial statements have not yet been made available for issuance.

d. An entity that elects earlier application of the pending content that links to this paragraph in an interim period shall reflect any adjustments as of the beginning of the annual period that includes that interim period.

e. An entity shall apply the pending content that links to this paragraph retrospectively to all periods presented.

f. An entity shall apply the pending content that links to this paragraph in the same period in which it applies the pending content that links to paragraphs 718-10-65-4 through 65-7 and 718-10-65-9 through 65-10.

g. In the first interim and annual period of adoption, an entity shall disclose the nature of and reason for the change in accounting principle and the effect of the change on prior periods retrospectively adjusted.

> Transition Related to Accounting Standards Update No. 2016-09, Compensation—Stock Compensation (Topic 718): Improvements to Employee Share-Based Payment Accounting

718-10-65-9 The following represents the transition and effective date information related to Accounting Standards Update No. 2016-09, *Compensation—Stock Compensation (Topic 718): Improvements to Employee Share-Based Payment Accounting:*

a. The pending content that links to this paragraph shall be effective for **public business entities** for fiscal years beginning after December 15, 2016, including interim periods within those fiscal years.

b. The pending content that links to this paragraph shall be effective for all other entities for fiscal years beginning after December 15, 2017, and interim periods within fiscal years beginning after December 15, 2018.

c. Earlier application of the pending content that links to this paragraph is permitted for:

1. Public business entities for reporting periods for which financial statements have not yet been issued

2. All other entities for reporting periods for which financial statements have not yet been made available for issuance.

d. An entity that elects earlier application of the pending content that links to this paragraph in an interim period shall reflect any adjustments as of the beginning of the annual period that includes that interim period.

e. An entity that elects the practical expedient to determine the expected term of an award shall apply the pending content that links to this paragraph prospectively (that is, apply the practical expedient to all awards that are measured at fair value after the effective date).

f. An entity shall apply the pending content that links to this paragraph in the same period in which it applies the pending content that links to paragraphs 718-10-65-4 through 65-8 and 718-10-65-10.

g. In the first interim and annual period of adoption, an entity shall disclose the nature of and reason for the change in accounting principle.

> Transition Related to Accounting Standards Update No. 2016-09, Compensation—Stock Compensation (Topic 718): Improvements to Employee Share-Based Payment Accounting

718-10-65-10 The following represents the transition and effective date information related to Accounting Standards Update No. 2016-09, *Compensation—Stock Compensation (Topic 718): Improvements to Employee Share-Based Payment Accounting:*

a. The pending content that links to this paragraph shall be effective for nonpublic entities for fiscal years beginning after December 15, 2017, and interim periods within fiscal years beginning after December 15, 2018.

b. Earlier application of the pending content that links to this paragraph is permitted for nonpublic entities for reporting periods for which financial statements have not yet been made available for issuance.

c. A nonpublic entity that elects earlier application of the pending content that links to this paragraph in an interim period shall reflect any adjustments as of the beginning of the annual period that includes that interim period.

d. A nonpublic entity shall apply the pending content that links to this paragraph on a modified retrospective basis through a cumulative-effect adjustment to retained earnings as of the beginning of the period in which the pending content that links to this paragraph is effective by adjusting the carrying amount of liability-classified awards that have not been settled as of the effective date from fair value to intrinsic value.

e. A nonpublic entity shall apply the pending content that links to this paragraph in the same period in which it applies the pending content that links to paragraphs 718-10-65-4 through 65-9.

f. In the first interim and annual period of adoption, a nonpublic entity shall disclose:

1. The nature of and reason for the change in accounting principle

2. The cumulative effect of the change on retained earnings or other components of equity or net assets in the statement of financial position as of the beginning of the period of adoption.

718-10-75 XBRL Elements

General Note: This section contains a list of XBRL elements that reference paragraphs in this Subtopic. For additional details regarding changes to the development version of the US GAAP Financial Reporting Taxonomy, refer to the FASB taxonomy review and comment system on the FASB web site.

Accounting Standards Update 2014-12 [Member] {2}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *AccountingStandardsUpdate201412Member*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 65 Transition > General, 65-3

Accounting Standards Update 2016-09 [Member]

[Label and/or reference(s) most recently revised on 07/14/2016 after the last taxonomy release.]
Element Name: *AccountingStandardsUpdate201609Member*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 65 Transition > General, 65-4(e)
- 718 Compensation—Stock Compensation > 10 Overall > 65 Transition > General, 65-4(g)
- 718 Compensation—Stock Compensation > 10 Overall > 65 Transition > General, 65-5(e)
- 718 Compensation—Stock Compensation > 10 Overall > 65 Transition > General, 65-5(g)
- 718 Compensation—Stock Compensation > 10 Overall > 65 Transition > General, 65-6(e)
- 718 Compensation—Stock Compensation > 10 Overall > 65 Transition > General, 65-6(g)
- 718 Compensation—Stock Compensation > 10 Overall > 65 Transition > General, 65-7(e)
- 718 Compensation—Stock Compensation > 10 Overall > 65 Transition > General, 65-7(g)
- 718 Compensation—Stock Compensation > 10 Overall > 65 Transition > General, 65-8(e)
- 718 Compensation—Stock Compensation > 10 Overall > 65 Transition > General, 65-8(g)

Adjustments to Additional Paid in Capital, Share-based Compensation, Requisite Service Period Recognition {3217}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *AdjustmentsToAdditionalPaidInCapitalSharebasedCompensationRequisiteServicePeriodRecognitionValue*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 35 Subsequent Measurement > General, 35-2
- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-1(b)

This XBRL element references the following paragraph(s)/term(s) in other Subtopic(s):

- 718 Compensation—Stock Compensation > 20 Awards Classified as Equity > 55 Implementation > General, 55-12
- 718 Compensation—Stock Compensation > 20 Awards Classified as Equity > 55 Implementation > General, 55-13

Allocated Share-based Compensation Expense {4353}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *AllocatedShareBasedCompensationExpense*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-1(b)
- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(h)(1)(i)
- 718 Compensation—Stock Compensation > 10 Overall > S99 SEC Materials > General, S99-1(SAB Topic 14.F)

Award Date [Axis] {544}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *AwardDateAxis*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-1
- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2

Award Date [Domain] {0}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]

Element Name: *AwardDateDomain*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-1
- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2

Award Type [Axis] {5060}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *AwardTypeAxis*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-1
- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2

Class of Warrant or Right [Axis] {814}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *ClassOfWarrantOrRightAxis*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-1(a)

This XBRL element references the following paragraph(s)/term(s) in other Subtopic(s):

- 505 Equity > 50 Equity-Based Payments to Non-Employees > 50 Disclosure > General, 50-1
- 505 Equity > 50 Equity-Based Payments to Non-Employees > S99 SEC Materials > General, S99-1

Class of Warrant or Right [Table]

[Label and/or reference(s) most recently revised on 11/24/2015 after the last taxonomy release.]
Element Name: *ClassOfWarrantOrRightTable*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-1(a)

This XBRL element references the following paragraph(s)/term(s) in other Subtopic(s):

- 505 Equity > 50 Equity-Based Payments to Non-Employees > 50 Disclosure > General, 50-1
- 505 Equity > 50 Equity-Based Payments to Non-Employees > S99 SEC Materials > General, S99-1

Class of Warrant or Right, Reason for Issuing to Nonemployees {7}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *ClassOfWarrantOrRightReasonForIssuingToNonemployees*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-1(a)

Compensation Related Costs, General [Text Block] {146}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *CompensationRelatedCostsGeneralTextBlock*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-1
- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2
- 718 Compensation—Stock Compensation > 10 Overall > S99 SEC Materials > General, S99-1(SAB TOPIC 14.F)

This XBRL element references the following paragraph(s)/term(s) in other Subtopic(s):

- 715 Compensation—Retirement Benefits > 20 Defined Benefit Plans—General > 50 Disclosure > General, 50-1
- 715 Compensation—Retirement Benefits > 70 Defined Contribution Plans > 50 Disclosure > General, 50-1

Compensation Related Costs, Policy [Policy Text Block] {837}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *CompensationRelatedCostsPolicyTextBlock*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(b),(f(1))

Deferred Compensation Arrangement with Individual, Compensation Expense {453}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *DeferredCompensationArrangementWithIndividualCompensationExpense*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-1(b)

This XBRL element references the following paragraph(s)/term(s) in other Subtopic(s):

- 710 Compensation—General > 10 Overall > 30 Initial Measurement > General, 30-1

Deferred Compensation Arrangement with Individual, Description {46}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *DeferredCompensationArrangementWithIndividualDescription*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-1(a)

This XBRL element references the following paragraph(s)/term(s) in other Subtopic(s):

- 710 Compensation—General > 10 Overall > 55 Implementation > General, 55-7

Deferred Compensation Arrangement with Individual, Exercise Price {52}
[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *DeferredCompensationArrangementWithIndividualExercisePrice*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(c)(1)

Deferred Compensation Arrangement with Individual, Fair Value of Shares Issued {83}
[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *DeferredCompensationArrangementWithIndividualFairValueOfSharesIssued*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(c)(2)

Deferred Compensation Arrangement with Individual, Maximum Contractual Term {78}
[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *DeferredCompensationArrangementWithIndividualMaximumContractualTerm1*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(a)(2)

This XBRL element references the following paragraph(s)/term(s) in other Subtopic(s):

- 710 Compensation—General > 10 Overall > 55 Implementation > General, 55-7

Deferred Compensation Arrangement with Individual, Requisite Service Period {152}
[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *DeferredCompensationArrangementWithIndividualRequisiteServicePeriod1*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(a)(1)

This XBRL element references the following paragraph(s)/term(s) in other Subtopic(s):

- 710 Compensation—General > 10 Overall > 55 Implementation > General, 55-7

Deferred Compensation Arrangement with Individual, Shares Authorized for Issuance {67}
[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *DeferredCompensationArrangementWithIndividualSharesAuthorizedForIssuance*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(a)(3)

Deferred Compensation Arrangement with Individual, Shares Issued {149}
[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *DeferredCompensationArrangementWithIndividualSharesIssued*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(l)

Deferred Compensation Arrangements, Overall, Description {13}
[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *DeferredCompensationArrangementsOverallDescription*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-1

This XBRL element references the following paragraph(s)/term(s) in other Subtopic(s):

- Endorsement Split-Dollar Life Insurance
- Rabbi Trusts

Deferred Compensation Equity {103}
[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *DeferredCompensationEquity*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 35 Subsequent Measurement > General, 35-2

Disclosure of Compensation Related Costs, Share-based Payments [Text Block] {4303}
[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *DisclosureOfCompensationRelatedCostsShareBasedPaymentsTextBlock*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-1
- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2
- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-4
- 718 Compensation—Stock Compensation > 10 Overall > S99 SEC Materials > General, S99-1(SAB Topic 14)

This XBRL element references the following paragraph(s)/term(s) in other Subtopic(s):

- 718 Compensation—Stock Compensation > 40 Employee Stock Ownership Plans > 50 Disclosure > General, 50-1

Disclosure of Share-based Compensation Arrangements by Share-based Payment Award [Table Text Block] {726}
[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]

Element Name: *DisclosureOfShareBasedCompensationArrangementsBySharePaymentAwardTextBlock*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-1
- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2

Employee Service Share-based Compensation, Allocation of Recognized Period Costs, Capitalized Amount {393}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *EmployeeServiceShareBasedCompensationAllocationOfRecognizedPeriodCostsCapitalizedAmount*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(h)(1)(ii)

Employee Service Share-based Compensation, Cash Flow Effect, Cash Used to Settle Awards {114}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *EmployeeServiceShareBasedCompensationCashFlowEffectCashUsedToSettleAwards*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(k)

Employee Service Share-based Compensation, Estimated Quantity of Shares to be Repurchased in Following Period {8}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *EmployeeServiceShareBasedCompensationEstimatedQuantityOfSharesToBeRepurchasedInFollowingPeriod*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(l)

Employee Service Share-based Compensation, Estimated Quantity of Shares to be Repurchased in Following Period, Maximum {0}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *EmployeeServiceShareBasedCompensationEstimatedQuantityOfSharesToBeRepurchasedInFollowingPeriodMaximum*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(l)

Employee Service Share-based Compensation, Estimated Quantity of Shares to be Repurchased in Following Period, Minimum {1}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *EmployeeServiceShareBasedCompensationEstimatedQuantityOfSharesToBeRepurchasedInFollowingPeriodMinimum*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(l)

Employee Service Share-based Compensation, Nonvested Awards, Compensation Cost Not yet Recognized {3243}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *EmployeeServiceShareBasedCompensationNonvestedAwardsTotalCompensationCostNotYetRecognized*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(i)

Employee Service Share-based Compensation, Nonvested Awards, Compensation Cost Not yet Recognized, Period for Recognition {3951}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *EmployeeServiceShareBasedCompensationNonvestedAwardsTotalCompensationCostNotYetRecognizedPeriodForRecognition1*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(i)

Employee Service Share-based Compensation, Nonvested Awards, Compensation Not yet Recognized, Share-based Awards Other than Options {1189}

[Label and/or reference(s) most recently revised on 07/14/2016 after the last taxonomy release.]
Element Name: *EmployeeServiceShareBasedCompensationNonvestedAwardsTotalCompensationCostNotYetRecognizedShareBasedAwardsOtherThanOptions*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(i)

Employee Service Share-based Compensation, Nonvested Awards, Compensation Not yet Recognized, Stock Options {1515}

[Label and/or reference(s) most recently revised on 07/14/2016 after the last taxonomy release.]
Element Name: *EmployeeServiceShareBasedCompensationNonvestedAwardsTotalCompensationCostNotYetRecognizedStockOptions*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(i)

Employee Service Share-based Compensation, Tax Benefit from Compensation Expense {1468}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *EmployeeServiceShareBasedCompensationTaxBenefitFromCompensationExpense*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(h)(1)(i)

Employee Service Share-based Compensation, Tax Benefit from Exercise of Stock Options
[Label and/or reference(s) most recently revised on 07/14/2016 after the last taxonomy release.]
Element Name: *EmployeeServiceSharebasedCompensationTaxBenefitFromExerciseOfStockOptions*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2A(a)

Equity Award [Domain] {3}
[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *ShareBasedCompensationArrangementsByShareBasedPaymentAwardAwardTypeAndPlanNameDomain*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-1(a)
- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(a),(g)

Equity-Based Arrangements, Individual Contracts, Type of Deferred Compensation [Axis] {292}
[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *DeferredCompensationArrangementWithIndividualShareBasedPaymentsByTypeOfDeferredCompensationAxis*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2

Equity-Based Arrangements, Individual Contracts, Type of Deferred Compensation [Domain] {1}
[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *EquityBasedArrangementsIndividualContractsTypeOfDeferredCompensationDomain*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2

Exercise Price Range [Axis] {1516}
[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *ShareBasedCompensationSharesAuthorizedUnderStockOptionPlansByExercisePriceRangeAxis*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(f)

Guarantor Obligations, Related Party Disclosure {6}
[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *GuaranteeObligationsRelatedPartyDisclosure*

This XBRL element references the following paragraph(s)/term(s) in other Subtopic(s):

- 460 Guarantees > 10 Overall > 50 Disclosure > General, 50-6
- 850 Related Party Disclosures > 10 Overall > 50 Disclosure > General, 50-1

Incremental Common Shares Attributable to Dilutive Effect of Call Options and Warrants {573}
[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *IncrementalCommonSharesAttributableToCallOptionsAndWarrants*

Nonvested Restricted Stock Shares Activity [Table Text Block] {259}
[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *NonvestedRestrictedStockSharesActivityTableTextBlock*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(c)

Notes Receivable, Related Parties {193}
[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *NotesReceivableRelatedParties*

This XBRL element references the following paragraph(s)/term(s) in other Subtopic(s):

- 850 Related Party Disclosures > 10 Overall > 50 Disclosure > General, 50-1(d)
- 944 Financial Services—Insurance > 210 Balance Sheet > S99 SEC Materials > General, S99-1(SX 210.7-03.3)

Notes Receivable, Related Parties, Current {121}
[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *NotesReceivableRelatedPartiesCurrent*

This XBRL element references the following paragraph(s)/term(s) in other Subtopic(s):

- 850 Related Party Disclosures > 10 Overall > 50 Disclosure > General, 50-1(d)

Notes Receivable, Related Parties, Noncurrent {115}
[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *NotesReceivableRelatedPartiesNoncurrent*

This XBRL element references the following paragraph(s)/term(s) in other Subtopic(s):

- 850 Related Party Disclosures > 10 Overall > 50 Disclosure > General, 50-1(d)

Payments Related to Tax Withholding for Share-based Compensation {964}

[Label and/or reference(s) most recently revised on 07/14/2016 after the last taxonomy release.]
Element Name: *PaymentsRelatedToTaxWithholdingForShareBasedCompensation*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 25 Recognition > General, 25-19A

This XBRL element references the following paragraph(s)/term(s) in other Subtopic(s):

- 230 Statement of Cash Flows > 10 Overall > 45 Other Presentation > General, 45-15(a)

Plan Name [Axis] {3826}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *PlanNameAxis*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-1
- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2

Proceeds from Issuance of Shares under Incentive and Share-based Compensation Plans, Excluding Stock Options {185}

[Label and/or reference(s) most recently revised on 07/15/2016 after the last taxonomy release.]
Element Name: *ProceedsFromIssuanceOfSharesUnderIncentiveAndShareBasedCompensationPlans*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2A(a)

This XBRL element references the following paragraph(s)/term(s) in other Subtopic(s):

- Financing Activities

Proceeds from Issuance of Shares under Incentive and Share-based Compensation Plans, Including Stock Options {526}

[Label and/or reference(s) most recently revised on 07/14/2016 after the last taxonomy release.]
Element Name: *ProceedsFromIssuanceOfSharesUnderIncentiveAndShareBasedCompensationPlansIncludingStockOptions*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2A(a)

This XBRL element references the following paragraph(s)/term(s) in other Subtopic(s):

- Financing Activities
- 230 Statement of Cash Flows > 10 Overall > 45 Other Presentation > General, 45-14(a)

Proceeds from Stock Options Exercised {2475}

[Label and/or reference(s) most recently revised on 07/14/2016 after the last taxonomy release.]
Element Name: *ProceedsFromStockOptionsExercised*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2A(a)

This XBRL element references the following paragraph(s)/term(s) in other Subtopic(s):

- Financing Activities
- 230 Statement of Cash Flows > 10 Overall > 45 Other Presentation > General, 45-14(a)

Related Party [Domain] {3}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *RelatedPartyDomain*

This XBRL element references the following paragraph(s)/term(s) in other Subtopic(s):

- Control
- Immediate Family
- Management

Revenue from Related Parties {1035}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *RevenueFromRelatedParties*

This XBRL element references the following paragraph(s)/term(s) in other Subtopic(s):

- 225 Income Statement > 10 Overall > S99 SEC Materials > General, S99-2(SX 210.5-03.1(e))

Schedule of Cash Proceeds Received and Tax Benefit from Share-based Payment Awards [Table Text Block]

[Label and/or reference(s) most recently revised on 07/14/2016 after the last taxonomy release.]
Element Name: *ScheduleOfCashProceedsReceivedAndTaxBenefitFromSharebasedPaymentAwardsTableTextBlock*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2A(a)

Schedule of Compensation Cost for Share-based Payment Arrangements, Allocation of Share-based Compensation Costs by Plan [Table Text Block] {713}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *ScheduleOfCompensationCostForShareBasedPaymentArrangementsAllocationOfShareBasedCompensationCostsByPlanTableTextBlock*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(h)(1)

Schedule of Deferred Compensation Arrangement with Individual, Share-based Payments [Table Text Block] {46}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *ScheduleOfDeferredCompensationArrangementWithIndividualShareBasedPaymentsTextBlock*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-1
- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2

This XBRL element references the following paragraph(s)/term(s) in other Subtopic(s):

- 710 Compensation—General > 10 Overall > 30 Initial Measurement > General, 30-1
- 710 Compensation—General > 10 Overall > 55 Implementation > General, 55-7
- 710 Compensation—General > 10 Overall > 55 Implementation > General, 55-8

Schedule of Deferred Compensation Arrangement with Individual, Share-based Payments [Table]

Element Name: *ScheduleOfDeferredCompensationArrangementWithIndividualShareBasedPaymentsTable*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-1
- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2

This XBRL element references the following paragraph(s)/term(s) in other Subtopic(s):

- 710 Compensation—General > 10 Overall > 30 Initial Measurement > General, 30-1
- 710 Compensation—General > 10 Overall > 55 Implementation > General, 55-7
- 710 Compensation—General > 10 Overall > 55 Implementation > General, 55-8

Schedule of Employee Service Share-based Compensation, Allocation of Recognized Period Costs [Table Text Block] {1341}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *ScheduleOfEmployeeServiceShareBasedCompensationAllocationOfRecognizedPeriodCostsTextBlock*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-1(b)
- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(h)(1)
- 718 Compensation—Stock Compensation > 10 Overall > S99 SEC Materials > General, S99-1(SAB Topic 14.F)

Schedule of Employee Service Share-based Compensation, Allocation of Recognized Period Costs [Table]

[Label and/or reference(s) most recently revised on 12/02/2015 after the last taxonomy release.]
Element Name: *ScheduleOfEmployeeServiceShareBasedCompensationAllocationOfRecognizedPeriodCostsTable*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-1(b)
- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(h)(1)
- 718 Compensation—Stock Compensation > 10 Overall > S99 SEC Materials > General, S99-1(SAB Topic 14.F)

Schedule of Nonvested Performance-based Units Activity [Table Text Block] {299}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *ScheduleOfNonvestedPerformanceBasedUnitsActivityTableTextBlock*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(c)(2)

Schedule of Nonvested Restricted Stock Units Activity [Table Text Block] {592}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *ScheduleOfNonvestedRestrictedStockUnitsActivityTableTextBlock*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(c)(2)

Schedule of Nonvested Share Activity [Table Text Block] {750}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *ScheduleOfNonvestedShareActivityTableTextBlock*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(c)(2)

Schedule of Other Share-based Compensation, Activity [Table Text Block] {161}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *ScheduleOfOtherShareBasedCompensationActivityTableTextBlock*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(c)(2)

Schedule of Share-based Compensation Arrangement by Share-based Payment Award, Options, Grants in Period, Grant Date Intrinsic Value [Table Text Block] {123}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *ScheduleOfShareBasedCompensationArrangementByShareBasedPaymentAwardOptionsGrantsInPeriodGrantDateIntrinsicValueTableTextBlock*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(d)(2)

Schedule of Share-based Compensation Arrangement by Share-based Payment Award, Options, Vested and Expected to Vest, Outstanding [Table Text Block] {128}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *ScheduleOfShareBasedCompensationArrangementByShareBasedPaymentAwardOptionsVestedAndExpectedToVestOutstandingTableTextBlock*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(e)(1)

Schedule of Share-based Compensation Arrangement by Share-based Payment Award, Performance-Based Units, Vested and Expected to Vest [Table Text Block] {71}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *ScheduleOfShareBasedCompensationArrangementByShareBasedPaymentAwardPerformanceBasedUnitsVestedAndExpectedToVestTableTextBlock*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(e)(1)

Schedule of Share-based Compensation Arrangement by Share-based Payment Award, Restricted Stock Units, Vested and Expected to Vest [Table Text Block] {62}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *ScheduleOfShareBasedCompensationArrangementByShareBasedPaymentAwardRestrictedStockUnitsVestedAndExpectedToVestTableTextBlock*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(e)(1)

Schedule of Share-based Compensation Arrangements by Share-based Payment Award [Table]

Element Name: *ScheduleOfShareBasedCompensationArrangementsByShareBasedPaymentAwardTable*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-1
- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2

Schedule of Share-based Compensation, Activity [Table Text Block] {645}

[Label and/or reference(s) most recently revised on 07/14/2016 after the last taxonomy release.]
Element Name: *ScheduleOfShareBasedCompensationActivityTableTextBlock*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(c)(2)
- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(d)
- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(e)

Schedule of Share-based Compensation, Employee Stock Purchase Plan, Activity [Table Text Block] {141}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *ScheduleOfShareBasedCompensationEmployeeStockPurchasePlanActivityTableTextBlock*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(g)

Schedule of Share-based Compensation, Nonemployee Director Stock Award Plan, Activity [Table Text Block] {65}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *ScheduleOfShareBasedCompensationNonemployeeDirectorStockAwardPlanActivityTableTextBlock*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(g)

Schedule of Share-based Compensation, Restricted Stock Units Award Activity [Table Text Block] {1059}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *ScheduleOfShareBasedCompensationRestrictedStockUnitsAwardActivityTableTextBlock*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(c)(1)

Schedule of Share-based Compensation, Shares Authorized under Stock Option Plans, by Exercise Price Range [Table Text Block] {1248}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *ScheduleOfShareBasedCompensationSharesAuthorizedUnderStockOptionPlansByExercisePriceRangeTextBlock*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2

Schedule of Share-based Compensation, Shares Authorized under Stock Option Plans, by Exercise Price Range [Table]

Element Name: *ScheduleOfShareBasedCompensationSharesAuthorizedUnderStockOptionPlansByExercisePriceRangeTable*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2

Schedule of Share-based Compensation, Stock Appreciation Rights Award Activity [Table Text Block] {136}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *ScheduleOfShareBasedCompensationStockAppreciationRightsAwardActivityTableTextBlock*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(c)(1)

Schedule of Share-based Compensation, Stock Options and Stock Appreciation Rights Award Activity [Table Text Block] {141}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *ScheduleOfShareBasedCompensationStockOptionsAndStockAppreciationRightsAwardActivityTableTextBlock*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(c)(1)

Schedule of Share-based Compensation, Stock Options, Activity [Table Text Block] {4074}

[Label and/or reference(s) most recently revised on 07/14/2016 after the last taxonomy release.]
Element Name: *ScheduleOfShareBasedCompensationStockOptionsActivityTableTextBlock*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(c)(1)
- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(d)
- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(e)

Schedule of Share-based Goods and Nonemployee Services Transaction [Table]

Element Name: *ScheduleOfShareBasedGoodsAndNonemployeeServicesTransactionTable*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2
- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-4

Schedule of Share-based Goods and Nonemployee Services Transaction by Supplier [Table Text Block] {13}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *ScheduleOfShareBasedGoodsAndNonemployeeServicesTransactionBySupplierTextBlock*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2
- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-4

Schedule of Share-based Payment Award, Employee Stock Purchase Plan, Valuation Assumptions [Table Text Block] {383}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *ScheduleOfShareBasedPaymentAwardEmployeeStockPurchasePlanValuationAssumptionsTableTextBlock*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(f)(2)

Schedule of Share-based Payment Award, Stock Options, Valuation Assumptions [Table Text Block] {3114}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *ScheduleOfShareBasedPaymentAwardStockOptionsValuationAssumptionsTableTextBlock*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(f)(2)

Schedule of Stockholders' Equity Note, Warrants or Rights [Table Text Block] {802}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *ScheduleOfStockholdersEquityNoteWarrantsOrRightsTextBlock*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-1(a)

This XBRL element references the following paragraph(s)/term(s) in other Subtopic(s):

- 505 Equity > 50 Equity-Based Payments to Non-Employees > 50 Disclosure > General, 50-1
- 505 Equity > 50 Equity-Based Payments to Non-Employees > S99 SEC Materials > General, S99-1

Schedule of Unrecognized Compensation Cost, Nonvested Awards [Table Text Block] {237}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *ScheduleOfUnrecognizedCompensationCostNonvestedAwardsTableTextBlock*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(i)

Share-based Compensation Arrangement by Share-based Payment Award, Award Requisite Service Period {562}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *ShareBasedCompensationArrangementByShareBasedPaymentAwardAwardRequisiteServicePeriod1*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(a)(1)

Share-based Compensation Arrangement by Share-based Payment Award, Award Vesting Period {3830}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *ShareBasedCompensationArrangementByShareBasedPaymentAwardAwardVestingPeriod1*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(a)(1)

Share-based Compensation Arrangement by Share-based Payment Award, Award Vesting Rights {393}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *ShareBasedCompensationArrangementByShareBasedPaymentAwardAwardVestingRights*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(a)(1)

Share-based Compensation Arrangement by Share-based Payment Award, Award Vesting Rights, Percentage {1265}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *SharebasedCompensationArrangementBySharebasedPaymentAwardAwardVestingRightsPercentage*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(a)(1)

Share-based Compensation Arrangement by Share-based Payment Award, Compensation Cost {190}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *SharebasedCompensationArrangementBySharebasedPaymentAwardCompensationCost1*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(h)(1)

Share-based Compensation Arrangement by Share-based Payment Award, Description {204}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *ShareBasedCompensationArrangementByShareBasedPaymentAwardDescription*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-1(a)
- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(a)

Share-based Compensation Arrangement by Share-based Payment Award, Discount from Market Price, Offering Date {174}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *ShareBasedCompensationArrangementByShareBasedPaymentAwardDiscountFromMarketPriceOfferingDate*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2

Share-based Compensation Arrangement by Share-based Payment Award, Discount from Market Price, Purchase Date {211}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *ShareBasedCompensationArrangementByShareBasedPaymentAwardDiscountFromMarketPricePurchaseDate*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2

Share-based Compensation Arrangement by Share-based Payment Award, Equity Instruments Other than Options, Forfeited in Period {3487}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *ShareBasedCompensationArrangementByShareBasedPaymentAwardEquityInstrumentsOtherThanOptionsForfeitedInPeriod*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(c)(1)(iv)(3)

Share-based Compensation Arrangement by Share-based Payment Award, Equity Instruments Other than Options, Forfeitures, Intrinsic Value, Amount Per Share {28}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *ShareBasedCompensationArrangementByShareBasedPaymentAwardEquityInstrumentsOtherThanOptionsForfeituresIntrinsicValue*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(c)(2)(iii)(3)

Share-based Compensation Arrangement by Share-based Payment Award, Equity Instruments Other than Options, Forfeitures, Weighted Average Grant Date Fair Value {3140}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *ShareBasedCompensationArrangementByShareBasedPaymentAwardEquityInstrumentsOtherThanOptionsForfeituresWeightedAverageGrantDateFairValue*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(c)(2)(iii)(3)

Share-based Compensation Arrangement by Share-based Payment Award, Equity Instruments Other than Options, Grants in Period {4110}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *ShareBasedCompensationArrangementByShareBasedPaymentAwardEquityInstrumentsOtherThanOptionsGrantsInPeriod*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(c)(2)(iii)(1)

Share-based Compensation Arrangement by Share-based Payment Award, Equity Instruments Other than Options, Grants in Period, Intrinsic Value, Amount Per Share {65}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *ShareBasedCompensationArrangementByShareBasedPaymentAwardEquityInstrumentsOtherThanOptionsGrantsInPeriodIntrinsicValue*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(c)(2)(iii)(1)

Share-based Compensation Arrangement by Share-based Payment Award, Equity Instruments Other than Options, Grants in Period, Weighted Average Grant Date Fair Value {3731}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *ShareBasedCompensationArrangementByShareBasedPaymentAwardEquityInstrumentsOtherThanOptionsGrantsInPeriodWeightedAverageGrantDateFairValue*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(c)(2)(iii)(1)

Share-based Compensation Arrangement by Share-based Payment Award, Equity Instruments Other than Options, Nonvested, Intrinsic Value, Amount Per Share {86}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *ShareBasedCompensationArrangementByShareBasedPaymentAwardEquityInstrumentsOtherThanOptionsNonvestedIntrinsicValue*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(c)(2)(i)-(ii)

Share-based Compensation Arrangement by Share-based Payment Award, Equity Instruments Other than Options, Nonvested, Number {3829}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *ShareBasedCompensationArrangementByShareBasedPaymentAwardEquityInstrumentsOtherThanOptionsNonvestedNumber*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(c)(2)(i)-(ii)

Share-based Compensation Arrangement by Share-based Payment Award, Equity Instruments Other than Options, Nonvested, Weighted Average Grant Date Fair Value {3520}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *ShareBasedCompensationArrangementByShareBasedPaymentAwardEquityInstrumentsOtherThanOptionsNonvestedWeightedAverageGrantDateFairValue*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(c)(2)(i)-(ii)

Share-based Compensation Arrangement by Share-based Payment Award, Equity Instruments Other than Options, Outstanding, Weighted Average Remaining Contractual Terms {720}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *ShareBasedCompensationArrangementByShareBasedPaymentAwardEquityInstrumentsOtherThanOptionsOutstandingWeightedAverageRemainingContractualT*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(e)(1)

Share-based Compensation Arrangement by Share-based Payment Award, Equity Instruments Other than Options, Period Increase (Decrease) {43}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *ShareBasedCompensationArrangementByShareBasedPaymentAwardEquityInstrumentsOtherThanOptionsPeriodIncreaseDecrease*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(c)(2)(iii)

Share-based Compensation Arrangement by Share-based Payment Award, Equity Instruments Other than Options, Share-based Liabilities Paid {96}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *ShareBasedCompensationArrangementByShareBasedPaymentAwardEquityInstrumentsOtherThanOptionsShareBasedLiabilitiesPaid*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(d)(2)

Share-based Compensation Arrangement by Share-based Payment Award, Equity Instruments Other than Options, Vested in Period {3709}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *ShareBasedCompensationArrangementByShareBasedPaymentAwardEquityInstrumentsOtherThanOptionsVestedInPeriod*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(c)(2)(iii)(2)

Share-based Compensation Arrangement by Share-based Payment Award, Equity Instruments Other than Options, Vested in Period, Fair Value {1614}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *ShareBasedCompensationArrangementByShareBasedPaymentAwardEquityInstrumentsOtherThanOptionsVestedInPeriodTotalFairValue*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(d)(2)

Share-based Compensation Arrangement by Share-based Payment Award, Equity Instruments Other than Options, Vested in Period, Intrinsic Value, Amount Per Share {50}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *ShareBasedCompensationArrangementByShareBasedPaymentAwardEquityInstrumentsOtherThanOptionsVestedInPeriodIntrinsicValue*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(c)(2)(iii)(2)

Share-based Compensation Arrangement by Share-based Payment Award, Equity Instruments Other than Options, Vested in Period, Weighted Average Grant Date Fair Value {3290}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *ShareBasedCompensationArrangementByShareBasedPaymentAwardEquityInstrumentsOtherThanOptionsVestedInPeriodWeightedAverageGrantDateFairValue*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(c)(2)(iii)(2)

Share-based Compensation Arrangement by Share-based Payment Award, Expiration Date {315}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *ShareBasedCompensationArrangementByShareBasedPaymentAwardExpirationDate*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(a)(2)

Share-based Compensation Arrangement by Share-based Payment Award, Expiration Period {2179}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *SharebasedCompensationArrangementBySharebasedPaymentAwardExpirationPeriod*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(a)(2)

Share-based Compensation Arrangement by Share-based Payment Award, Fair Value Assumptions, Discount for Postvesting Restrictions {43}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *ShareBasedCompensationArrangementByShareBasedPaymentAwardFairValueAssumptionsDiscountForPostvestingRestrictions*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(f)(2)(v)

Share-based Compensation Arrangement by Share-based Payment Award, Fair Value Assumptions, Expected Dividend Payments {120}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *ShareBasedCompensationArrangementByShareBasedPaymentAwardFairValueAssumptionsExpectedDividendPayments*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(f)(2)(iii)

Share-based Compensation Arrangement by Share-based Payment Award, Fair Value Assumptions, Expected Dividend Rate {3440}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *ShareBasedCompensationArrangementByShareBasedPaymentAwardFairValueAssumptionsExpectedDividendRate*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(f)(2)(iii)

Share-based Compensation Arrangement by Share-based Payment Award, Fair Value Assumptions, Expected Term {3749}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *SharebasedCompensationArrangementBySharebasedPaymentAwardFairValueAssumptionsExpectedTerm1*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(f)(2)(i)
- 718 Compensation—Stock Compensation > 10 Overall > S99 SEC Materials > General, S99-1(SAB Topic 14.D.2)

Share-based Compensation Arrangement by Share-based Payment Award, Fair Value Assumptions, Expected Term, Simplified Method {36}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *ShareBasedCompensationArrangementByShareBasedPaymentAwardFairValueAssumptionsExpectedTermSimplifiedMethod*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(f)(2)(i)
- 718 Compensation—Stock Compensation > 10 Overall > S99 SEC Materials > General, S99-1(SAB Topic 14.D.2.Q6)

Share-based Compensation Arrangement by Share-based Payment Award, Fair Value Assumptions, Expected Volatility Rate {3267}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *ShareBasedCompensationArrangementByShareBasedPaymentAwardFairValueAssumptionsExpectedVolatilityRate*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(f)(2)(ii)

Share-based Compensation Arrangement by Share-based Payment Award, Fair Value Assumptions, Method Used {163}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]

Element Name: *ShareBasedCompensationArrangementByShareBasedPaymentAwardFairValueAssumptionsMethodUsed*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(f)(1)

Share-based Compensation Arrangement by Share-based Payment Award, Fair Value Assumptions, Range of Dividends Used {4}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *ShareBasedCompensationArrangementByShareBasedPaymentAwardFairValueAssumptionsRangeOfDividendsUsed*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(f)(2)(iii)

Share-based Compensation Arrangement by Share-based Payment Award, Fair Value Assumptions, Risk Free Interest Rate {3491}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *ShareBasedCompensationArrangementByShareBasedPaymentAwardFairValueAssumptionsRiskFreeInterestRate*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(f)(2)(iv)

Share-based Compensation Arrangement by Share-based Payment Award, Fair Value Assumptions, Weighted Average Expected Dividend {41}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *ShareBasedCompensationArrangementByShareBasedPaymentAwardFairValueAssumptionsWeightedAverageExpectedDividend*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(f)(2)(iii)

Share-based Compensation Arrangement by Share-based Payment Award, Fair Value Assumptions, Weighted Average Volatility Rate {494}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *ShareBasedCompensationArrangementByShareBasedPaymentAwardFairValueAssumptionsWeightedAverageVolatilityRate*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(f)(2)(ii)

Share-based Compensation Arrangement by Share-based Payment Award, Maximum Employee Subscription Rate {299}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *ShareBasedCompensationArrangementByShareBasedPaymentAwardMaximumEmployeeSubscriptionRate*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2

Share-based Compensation Arrangement by Share-based Payment Award, Maximum Number of Shares Per Employee {215}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *ShareBasedCompensationArrangementByShareBasedPaymentAwardMaximumNumberOfSharesPerEmployee*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2

Share-based Compensation Arrangement by Share-based Payment Award, Method of Measuring Cost of Award {14}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *ShareBasedCompensationArrangementByShareBasedPaymentAwardMethodOfMeasuringCostOfAward*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(b)

Share-based Compensation Arrangement by Share-based Payment Award, Non-Option Equity Instruments, Exercised {391}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *ShareBasedCompensationArrangementByShareBasedPaymentAwardNonOptionEquityInstrumentsExercised*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(c)(1)(iv)(2)

Share-based Compensation Arrangement by Share-based Payment Award, Non-Option Equity Instruments, Expirations {148}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *ShareBasedCompensationArrangementByShareBasedPaymentAwardNonOptionEquityInstrumentsExpirations*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(c)(1)(iv)(4)

Share-based Compensation Arrangement by Share-based Payment Award, Non-Option Equity Instruments, Forfeitures {218}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *ShareBasedCompensationArrangementByShareBasedPaymentAwardNonOptionEquityInstrumentsForfeitures*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(c)(1)(iv)(3)

Share-based Compensation Arrangement by Share-based Payment Award, Non-Option Equity Instruments, Forfeitures and Expirations {135}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *ShareBasedCompensationArrangementByShareBasedPaymentAwardNonOptionEquityInstrumentsForfeituresAndExpirations*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(c)(1)(iv)(3)-(4)

Share-based Compensation Arrangement by Share-based Payment Award, Non-Option Equity Instruments, Granted {538}
[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *ShareBasedCompensationArrangementByShareBasedPaymentAwardNonOptionEquityInstrumentsGranted*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(c)(1)(iv)(1)

Share-based Compensation Arrangement by Share-based Payment Award, Non-Option Equity Instruments, Other, Description {8}
[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *ShareBasedCompensationArrangementByShareBasedPaymentAwardNonOptionEquityInstrumentsOtherDescription*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(c)(1)

Share-based Compensation Arrangement by Share-based Payment Award, Non-Option Equity Instruments, Outstanding, Number {665}
[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *ShareBasedCompensationArrangementByShareBasedPaymentAwardNonOptionEquityInstrumentsOutstandingNumber*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(c)(1)(i)
- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(c)(1)(ii)

Share-based Compensation Arrangement by Share-based Payment Award, Non-Option Equity Instruments, Period Increase (Decrease) {12}
[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *ShareBasedCompensationArrangementByShareBasedPaymentAwardNonOptionEquityInstrumentsPeriodIncreaseDecrease*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(c)(1)

Share-based Compensation Arrangement by Share-based Payment Award, Number of Shares Authorized {3451}
[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *ShareBasedCompensationArrangementByShareBasedPaymentAwardNumberOfSharesAuthorized*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(a)(3)

Share-based Compensation Arrangement by Share-based Payment Award, Number of Shares Available for Grant {3110}
[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *ShareBasedCompensationArrangementByShareBasedPaymentAwardNumberOfSharesAvailableForGrant*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2

Share-based Compensation Arrangement by Share-based Payment Award, Options, Exercisable, Intrinsic Value {3023}
[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *SharebasedCompensationArrangementBySharebasedPaymentAwardOptionsExercisableIntrinsicValue1*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2

Share-based Compensation Arrangement by Share-based Payment Award, Options, Exercisable, Number {3803}
[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *ShareBasedCompensationArrangementByShareBasedPaymentAwardOptionsExercisableNumber*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(c)(1)(iii)

Share-based Compensation Arrangement by Share-based Payment Award, Options, Exercisable, Weighted Average Exercise Price {3615}
[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *ShareBasedCompensationArrangementByShareBasedPaymentAwardOptionsExercisableWeightedAverageExercisePrice*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(c)(1)(iii)

Share-based Compensation Arrangement by Share-based Payment Award, Options, Exercisable, Weighted Average Remaining Contractual Term {2997}
[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *SharebasedCompensationArrangementBySharebasedPaymentAwardOptionsExercisableWeightedAverageRemainingContractualTerm1*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2

Share-based Compensation Arrangement by Share-based Payment Award, Options, Exercises in Period {4455}
[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *StockIssuedDuringPeriodSharesStockOptionsExercised*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(c)(1)(iv)(2)

This XBRL element references the following paragraph(s)/term(s) in other Subtopic(s):

- 505 Equity > 10 Overall > 50 Disclosure > General, 50-2
- 505 Equity > 10 Overall > S99 SEC Materials > General, S99-1(SX 210.3-04)

Share-based Compensation Arrangement by Share-based Payment Award, Options, Exercises in Period, Intrinsic Value {2890}
[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *ShareBasedCompensationArrangementByShareBasedPaymentAwardOptionsExercisesInPeriodTotalIntrinsicValue*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(d)(2)

Share-based Compensation Arrangement by Share-based Payment Award, Options, Expirations in Period {1355}
[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *ShareBasedCompensationArrangementByShareBasedPaymentAwardOptionsExpirationsInPeriod*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(c)(1)(iv)(4)

Share-based Compensation Arrangement by Share-based Payment Award, Options, Forfeitures and Expirations in Period {1631}
[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *ShareBasedCompensationArrangementByShareBasedPaymentAwardOptionsForfeituresAndExpirationsInPeriod*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(c)(1)(iv)(3)-(4)

Share-based Compensation Arrangement by Share-based Payment Award, Options, Forfeitures and Expirations in Period, Weighted Average Exercise Price {1610}
[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *ShareBasedCompensationArrangementByShareBasedPaymentAwardOptionsForfeituresAndExpirationsInPeriodWeightedAverageExercisePrice*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(c)(1)(iv)(3)-(4)

Share-based Compensation Arrangement by Share-based Payment Award, Options, Forfeitures and Expirations in Period, Weighted Average Intrinsic Value {61}
[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *ShareBasedCompensationArrangementByShareBasedPaymentAwardOptionsForfeituresAndExpirationsInPeriodWeightedAverageIntrinsicValue*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(d)(1)

Share-based Compensation Arrangement by Share-based Payment Award, Options, Forfeitures in Period {2843}
[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *ShareBasedCompensationArrangementByShareBasedPaymentAwardOptionsForfeituresInPeriod*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(c)(1)(iv)(3)

Share-based Compensation Arrangement by Share-based Payment Award, Options, Grants in Period, Grant Date Intrinsic Value {126}
[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *ShareBasedCompensationArrangementByShareBasedPaymentAwardOptionsGrantsInPeriodGrantDateIntrinsicValue*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(d)(1)

Share-based Compensation Arrangement by Share-based Payment Award, Options, Grants in Period, Net of Forfeitures {1710}
[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *ShareBasedCompensationArrangementByShareBasedPaymentAwardOptionsGrantsInPeriod*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(c)(1)(iv)(1)

Share-based Compensation Arrangement by Share-based Payment Award, Options, Grants in Period, Weighted Average Grant Date Fair Value {3181}
[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *ShareBasedCompensationArrangementByShareBasedPaymentAwardOptionsGrantsInPeriodWeightedAverageGrantDateFairValue*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(d)(1)

Share-based Compensation Arrangement by Share-based Payment Award, Options, Grants in Period, Weighted Average Grant Date Fair Value [Table Text Block] {206}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *ShareBasedCompensationArrangementByShareBasedPaymentAwardOptionsGrantsInPeriodWeightedAverageGrantDateFairValueTableTextBlock*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(d)(1)

Share-based Compensation Arrangement by Share-based Payment Award, Options, Other Increases (Decreases) in Period {90}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *ShareBasedCompensationArrangementByShareBasedPaymentAwardOptionsOtherIncreasesDecreasesInPeriod*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(c)(1)

Share-based Compensation Arrangement by Share-based Payment Award, Options, Other Increases (Decreases) in Period, Description {13}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *ShareBasedCompensationArrangementByShareBasedPaymentAwardOptionsOtherIncreasesDecreasesInPeriodDescription*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(c)(1)

Share-based Compensation Arrangement by Share-based Payment Award, Options, Outstanding, Intrinsic Value {3487}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *ShareBasedCompensationArrangementByShareBasedPaymentAwardOptionsOutstandingIntrinsicValue*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2

Share-based Compensation Arrangement by Share-based Payment Award, Options, Outstanding, Number {4783}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *ShareBasedCompensationArrangementByShareBasedPaymentAwardOptionsOutstandingNumber*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2
- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(c)(1)(i)-(ii)

Share-based Compensation Arrangement by Share-based Payment Award, Options, Outstanding, Period Increase (Decrease) {60}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *ShareBasedCompensationArrangementByShareBasedPaymentAwardOptionsOutstandingPeriodIncreaseDecrease*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(c)(1)

Share-based Compensation Arrangement by Share-based Payment Award, Options, Outstanding, Weighted Average Exercise Price {4589}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *ShareBasedCompensationArrangementByShareBasedPaymentAwardOptionsOutstandingWeightedAverageExercisePrice*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(c)(1)(i)

Share-based Compensation Arrangement by Share-based Payment Award, Options, Outstanding, Weighted Average Remaining Contractual Term {3578}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *SharebasedCompensationArrangementBySharebasedPaymentAwardOptionsOutstandingWeightedAverageRemainingContractualTerm2*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(e)(1)

Share-based Compensation Arrangement by Share-based Payment Award, Options, Vested and Expected to Vest, Exercisable [Table Text Block] {59}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *ShareBasedCompensationArrangementByShareBasedPaymentAwardOptionsVestedAndExpectedToVestExercisableTableTextBlock*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(e)(2)

Share-based Compensation Arrangement by Share-based Payment Award, Options, Vested and Expected to Vest, Exercisable, Aggregate Intrinsic Value {731}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *ShareBasedCompensationArrangementByShareBasedPaymentAwardOptionsVestedAndExpectedToVestExercisableAggregateIntrinsicValue*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(e)(2)

Share-based Compensation Arrangement by Share-based Payment Award, Options, Vested and Expected to Vest, Exercisable, Number {682}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *ShareBasedCompensationArrangementByShareBasedPaymentAwardOptionsVestedAndExpectedToVestExercisableNumber*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(e)(2)

Share-based Compensation Arrangement by Share-based Payment Award, Options, Vested and Expected to Vest, Exercisable, Weighted Average Exercise Price {606}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *ShareBasedCompensationArrangementByShareBasedPaymentAwardOptionsVestedAndExpectedToVestExercisableWeightedAverageExercisePrice*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(e)(2)

Share-based Compensation Arrangement by Share-based Payment Award, Options, Vested and Expected to Vest, Exercisable, Weighted Average Remaining Contractual Term {598}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *SharebasedCompensationArrangementBySharebasedPaymentAwardOptionsVestedAndExpectedToVestExercisableWeightedAverageRemainingContractualTer*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(e)(2)

Share-based Compensation Arrangement by Share-based Payment Award, Options, Vested and Expected to Vest, Outstanding and Exercisable [Table Text Block] {262}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *ShareBasedCompensationArrangementByShareBasedPaymentAwardOptionsVestedAndExpectedToVestOutstandingAndExercisableTableTextBlock*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(e)

Share-based Compensation Arrangement by Share-based Payment Award, Options, Vested and Expected to Vest, Outstanding, Aggregate Intrinsic Value {1522}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *ShareBasedCompensationArrangementByShareBasedPaymentAwardOptionsVestedAndExpectedToVestOutstandingAggregateIntrinsicValue*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(e)

Share-based Compensation Arrangement by Share-based Payment Award, Options, Vested and Expected to Vest, Outstanding, Number {1817}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *ShareBasedCompensationArrangementByShareBasedPaymentAwardOptionsVestedAndExpectedToVestOutstandingNumber*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(e)(1)

Share-based Compensation Arrangement by Share-based Payment Award, Options, Vested and Expected to Vest, Outstanding, Weighted Average Exercise Price {1569}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *ShareBasedCompensationArrangementByShareBasedPaymentAwardOptionsVestedAndExpectedToVestOutstandingWeightedAverageExercisePrice*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(e)(1)

Share-based Compensation Arrangement by Share-based Payment Award, Options, Vested and Expected to Vest, Outstanding, Weighted Average Remaining Contractual Term {1447}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *SharebasedCompensationArrangementBySharebasedPaymentAwardOptionsVestedAndExpectedToVestOutstandingWeightedAverageRemainingContractualTer*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(e)(1)

Share-based Compensation Arrangement by Share-based Payment Award, Options, Vested in Period, Fair Value {1049}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *SharebasedCompensationArrangementBySharebasedPaymentAwardOptionsVestedInPeriodFairValue1*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(c)

Share-based Compensation Arrangement by Share-based Payment Award, Other Share Increase (Decrease) {64}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *ShareBasedCompensationArrangementByShareBasedPaymentAwardOtherShareIncreaseDecrease*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2

Share-based Compensation Arrangement by Share-based Payment Award, Per Share Weighted Average Price of Shares Purchased {184}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *ShareBasedCompensationArrangementByShareBasedPaymentAwardPerShareWeightedAveragePriceOfSharesPurchased*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-1(a)
- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2

Share-based Compensation Arrangement by Share-based Payment Award, Plan Modification, Description and Terms {56}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *ShareBasedCompensationArrangementByShareBasedPaymentAwardPlanModificationDescriptionAndTerms*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(h)(2)(i)

Share-based Compensation Arrangement by Share-based Payment Award, Plan Modification, Incremental Compensation Cost {246}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *ShareBasedCompensationArrangementByShareBasedPaymentAwardPlanModificationIncrementalCompensationCost*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(h)(2)(iii)

Share-based Compensation Arrangement by Share-based Payment Award, Plan Modification, Number of Employees Affected {64}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *ShareBasedCompensationArrangementByShareBasedPaymentAwardPlanModificationNumberOfEmployeesAffected*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(h)(2)(ii)

Share-based Compensation Arrangement by Share-based Payment Award, Policy for Issuing Shares upon Exercise {4}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *ShareBasedCompensationArrangementByShareBasedPaymentAwardPolicyForIssuingSharesUponExercise*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(l)

Share-based Compensation Arrangement by Share-based Payment Award, Shares Issued in Period {767}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *ShareBasedCompensationArrangementByShareBasedPaymentAwardSharesIssuedInPeriod*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2

Share-based Compensation Arrangement by Share-based Payment Award, Shares Purchased for Award {176}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *ShareBasedCompensationArrangementByShareBasedPaymentAwardSharesPurchasedForAward*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-1(a)
- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2

Share-based Compensation Arrangement by Share-based Payment Award, Shares to be Repurchased Next Year {5}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *ShareBasedCompensationArrangementByShareBasedPaymentAwardSharesToBeRepurchasedNextYear*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(l)

Share-based Compensation Arrangement by Share-based Payment Award, Terms of Award {176}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *ShareBasedCompensationArrangementByShareBasedPaymentAwardTermsOfAward*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(a)

Share-based Compensation, Forfeitures Accounting Policy [Policy Text Block]

[Label and/or reference(s) most recently revised on 07/14/2016 after the last taxonomy release.]
Element Name: *SharebasedCompensationForfeituresAccountingPolicyPolicyTextBlock*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 35 Subsequent Measurement > General, 35-3
- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(m)

Share-based Compensation, Option and Incentive Plans Policy [Policy Text Block] {4566}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *ShareBasedCompensationOptionAndIncentivePlansPolicy*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-1

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(b),(f)

Share-based Compensation, Option and Incentive Plans, Director Policy [Policy Text Block] {68}
[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *ShareBasedCompensationOptionAndIncentivePlansDirectorPolicy*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-1

Share-based Compensation, Performance Shares Award Nonvested Activity [Table Text Block] {61}
[Label and/or reference(s) most recently revised on 07/14/2016 after the last taxonomy release.]
Element Name: *ShareBasedCompensationPerformanceSharesAwardUnvestedActivityTableTextBlock*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(c)

Share-based Compensation, Performance Shares Award Outstanding Activity [Table Text Block] {97}
[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *ShareBasedCompensationPerformanceSharesAwardOutstandingActivityTableTextBlock*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(c)

Share-based Compensation, Shares Authorized under Stock Option Plans, Exercise Price Range [Domain] {2}
[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *ShareBasedCompensationSharesAuthorizedUnderStockOptionPlansExercisePriceRangeDomain*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(g)

Share-based Compensation, Shares Authorized under Stock Option Plans, Exercise Price Range, Exercisable Options, Weighted Average Exercise Price {991}
[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *SharebasedCompensationSharesAuthorizedUnderStockOptionPlansExercisePriceRangeExercisableOptionsWeightedAverageExercisePrice1*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(c)(1)(iii)

Share-based Compensation, Shares Authorized under Stock Option Plans, Exercise Price Range, Exercisable Options, Weighted Average Remaining Contractual Term {410}
[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *SharebasedCompensationSharesAuthorizedUnderStockOptionPlansExercisePriceRangeExercisableOptionsWeightedAverageRemainingContractualTerm2*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(e)(2)

Share-based Compensation, Shares Authorized under Stock Option Plans, Exercise Price Range, Lower Range Limit {1297}
[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *ShareBasedCompensationSharesAuthorizedUnderStockOptionPlansExercisePriceRangeLowerRangeLimit*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(g)

Share-based Compensation, Shares Authorized under Stock Option Plans, Exercise Price Range, Number of Exercisable Options {1061}
[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *ShareBasedCompensationSharesAuthorizedUnderStockOptionPlansExercisePriceRangeNumberOfExercisableOptions*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(c)(iii)

Share-based Compensation, Shares Authorized under Stock Option Plans, Exercise Price Range, Number of Outstanding Options {1113}
[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *ShareBasedCompensationSharesAuthorizedUnderStockOptionPlansExercisePriceRangeNumberOfOutstandingOptions*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(c)(1)(i)-(ii)

Share-based Compensation, Shares Authorized under Stock Option Plans, Exercise Price Range, Outstanding Options, Weighted Average Exercise Price {997}
[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *SharebasedCompensationSharesAuthorizedUnderStockOptionPlansExercisePriceRangeOutstandingOptionsWeightedAverageExercisePriceBeginningBalance1*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(c)(1)(i)-(ii)

Share-based Compensation, Shares Authorized under Stock Option Plans, Exercise Price Range, Outstanding Options, Weighted Average Remaining Contractual Term {1068}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *SharebasedCompensationSharesAuthorizedUnderStockOptionPlansExercisePriceRangeOutstandingOptionsWeightedAverageRemainingContractualTerm2*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(e)(1)

Share-based Compensation, Shares Authorized under Stock Option Plans, Exercise Price Range, Upper Range Limit {1293}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *ShareBasedCompensationSharesAuthorizedUnderStockOptionPlansExercisePriceRangeUpperRangeLimit*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(g)

Share-based Goods and Nonemployee Services Transaction {2}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *ShareBasedGoodsAndNonemployeeServicesTransaction*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-1
- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2

Share-based Goods and Nonemployee Services Transaction, Capitalized Cost {17}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *ShareBasedGoodsAndNonemployeeServicesTransactionCapitalizedCost*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(h)(1)(ii)
- 718 Compensation—Stock Compensation > 10 Overall > S99 SEC Materials > General, S99-1(SAB Topic 14.I)

Share-based Goods and Nonemployee Services Transaction, Description of Goods or Services Received {2}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *ShareBasedGoodsAndNonemployeeServicesTransactionDescriptionOfGoodsOrServicesReceived*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-1(a)

Share-based Goods and Nonemployee Services Transaction, Modification of Terms, Amount of Changes and Report Lines Affected {0}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *ShareBasedGoodsAndNonemployeeServicesTransactionModificationOfTermsAmountOfChangesAndReportLinesAffected*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(h)(2)

Share-based Goods and Nonemployee Services Transaction, Modification of Terms, Description and Terms {6}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *ShareBasedGoodsAndNonemployeeServicesTransactionModificationOfTermsDescriptionAndTerms*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(h)(2)(i)

Share-based Goods and Nonemployee Services Transaction, Modification of Terms, Incremental Compensation Cost {9}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *ShareBasedGoodsAndNonemployeeServicesTransactionModificationOfTermsIncrementalCompensationCost*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(h)(2)(iii)

Share-based Goods and Nonemployee Services Transaction, Modification of Terms, Number of Vendors Affected {0}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *ShareBasedGoodsAndNonemployeeServicesTransactionModificationOfTermsNumberOfVendorsAffected*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(h)(2)(ii)

Share-based Goods and Nonemployee Services Transaction, Quantity of Securities Issued {113}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *ShareBasedGoodsAndNonemployeeServicesTransactionQuantityOfSecuritiesIssued*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(c)(1)(iv)(1)

Share-based Goods and Nonemployee Services Transaction, Report Lines Affected {0}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *ShareBasedGoodsAndNonemployeeServicesTransactionReportLinesAffected*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-1

Share-based Goods and Nonemployee Services Transaction, Securities Issued {3}
[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *ShareBasedGoodsAndNonemployeeServicesTransactionSecuritiesIssued*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(c)(1)(iv)(1)

Share-based Goods and Nonemployee Services Transaction, Shares Approved for Issuance {44}
[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *ShareBasedGoodsAndNonemployeeServicesTransactionSharesApprovedForIssuance*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(a)(3)

Share-based Goods and Nonemployee Services Transaction, Stockholders' Equity {45}
[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *ShareBasedGoodsAndNonemployeeServicesTransactionStockholdersEquity*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2

Share-based Goods and Nonemployee Services Transaction, Supplier [Domain] {0}
[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *ShareBasedGoodsAndNonemployeeServicesTransactionSupplierDomain*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-1(a)

Share-based Goods and Nonemployee Services Transaction, Tax Benefit {4}
[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *ShareBasedGoodsAndNonemployeeServicesTransactionTaxBenefit*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(h)(1)(i)

Share-based Goods and Nonemployee Services Transaction, Valuation Method {4}
[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *ShareBasedGoodsAndNonemployeeServicesTransactionValuationMethod*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-1(c)
- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(f)

Share-based Goods and Nonemployee Services Transaction, Valuation Method, Expected Dividend Rate {35}
[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *ShareBasedGoodsAndNonemployeeServicesTransactionValuationMethodExpectedDividendRate*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(f)(2)(iii)

Share-based Goods and Nonemployee Services Transaction, Valuation Method, Expected Term {48}
[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *ShareBasedGoodsAndNonemployeeServicesTransactionValuationMethodExpectedTerm1*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(f)(2)(i)

Share-based Goods and Nonemployee Services Transaction, Valuation Method, Expected Volatility Rate {36}
[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *ShareBasedGoodsAndNonemployeeServicesTransactionValuationMethodExpectedVolatilityRate*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(f)(2)(ii)

Share-based Goods and Nonemployee Services Transaction, Valuation Method, Risk Free Interest Rate {40}
[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *ShareBasedGoodsAndNonemployeeServicesTransactionValuationMethodRiskFreeInterestRate*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(f)(2)(iv)

Stock Compensation Plan [Member] {622}
[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *StockCompensationPlanMember*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- Share-Based Payment Arrangements

- 718 Compensation—Stock Compensation > 10 Overall > 45 Other Presentation > General, 45-1

Stock Granted, Value, Share-based Compensation, Forfeited {43}
[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *StockGrantedDuringPeriodValueSharebasedCompensationForfeited*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2c(2)

Stock Granted, Value, Share-based Compensation, Net of Forfeitures {259}
[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *StockGrantedDuringPeriodValueSharebasedCompensation*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 30 Initial Measurement > General, 30-3

This XBRL element references the following paragraph(s)/term(s) in other Subtopic(s):

- 718 Compensation—Stock Compensation > 30 Awards Classified as Liabilities > 35 Subsequent Measurement > General, 35-1

Stock Issued During Period, Value, Share-based Compensation, Forfeited {113}
[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *StockIssuedDuringPeriodValueShareBasedCompensationForfeited*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2c(1)

Stock Issued During Period, Value, Share-based Compensation, Net of Forfeitures {1743}
[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *StockIssuedDuringPeriodValueShareBasedCompensation*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-1(c)
- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(d)(1)

Supplier [Axis] {140}
[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *ShareBasedGoodsAndNonemployeeServicesTransactionBySupplierAxis*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2
- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-4

Vesting [Axis] {1382}
[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *VestingAxis*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2

Vesting [Domain] {0}
[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *VestingDomain*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2

718-10-S00 Status

General Note: The Status Section identifies changes to this Subtopic resulting from Accounting Standards Updates. The Section provides references to the affected Codification content and links to the related Accounting Standards Updates. Nonsubstantive changes for items such as editorial, link and similar corrections are included separately in Maintenance Updates.

General

718-10-S00-1 The following table identifies the changes made to this Subtopic.

Paragraph	Action	Accounting Standards Update	Date
718-10-S25-1	Added	Accounting Standards Update No. 2010-05	01/15/2010
718-10-S30-1	Amended	Accounting Standards Update No. 2009-04	08/26/2009

718-10-S45-2	Amended	Accounting Standards Update No. 2009-04	08/26/2009
718-10-S50-1	Amended	Accounting Standards Update No. 2009-07	09/15/2009
718-10-S99-1	Amended	Accounting Standards Update No. 2012-03	08/27/2012
718-10-S99-1	Amended	Accounting Standards Update No. 2009-07	09/15/2009
718-10-S99-1	Amended	Accounting Standards Update No. 2009-03	08/24/2009
718-10-S99-2	Added	Accounting Standards Update No. 2010-05	01/15/2010

718-10-S15 Scope and Scope Exceptions

General Note: The Scope and Scope Exceptions Section outlines the items (for example, the entities, transactions, instruments, or events) to which the guidance in the Subtopic does or does not apply. In some cases, the Section may contain definitional or other text to frame the scope.

General

> Applicability of Topic 718 to Share-Based Transactions with Nonemployees

718-10-S15-1 See paragraph 718-10-S99-1, SAB Topic 14.A, for SEC Staff views regarding the applicability of Topic 718 to transactions with nonemployees.

718-10-S25 Recognition

General Note: The Recognition Section provides guidance on the required criteria, timing, and location (within the financial statements) for recording a particular item in the financial statements. Disclosure is not recognition.

General

> Escrowed Share Arrangements and the Presumption of Compensation

718-10-S25-1 See paragraph 718-10-S99-2: SEC Staff Announcement: Escrowed Share Arrangements and the Presumption of Compensation, for SEC Staff views on the accounting for escrowed share arrangements.

718-10-S30 Initial Measurement

General Note: The Initial Measurement Section provides guidance on the criteria and amounts used to measure a particular item at the date of initial recognition.

General

> Initial Carrying Amount of Certain Employee Share-Based Payment Arrangements with Redemption Provisions

718-10-S30-1 See paragraph 480-10-S99-3A, SEC Staff Announcement: Classification and Measurement of Redeemable Securities, for SEC Staff views on the accounting for options or similar instruments granted in conjunction with share-based payment arrangements with employees for which the terms may permit redemption of the option or underlying share.

718-10-S45 Other Presentation Matters

General Note: The Other Presentation Matters Section provides guidance on other presentation matters not addressed in the Recognition, Initial Measurement, Subsequent Measurement, and Derecognition Sections. Other presentation matters may include items such as current or long-term balance sheet classification, cash flow presentation, earnings per share matters, and so forth. The FASB Codification also contains Presentation Topics, which provide guidance for general presentation and display items. See those Topics for general guidance.

General

> **Presentation of Compensation Expense Associated with Share-Based Payment Arrangements**

718-10-S45-1 See paragraph 718-10-S99-1, SAB Topic 14.F, for SEC Staff views on income statement presentation of the expense related to share-based payment arrangements.

> **Consideration of Redemption Features on Classification of Certain Employee Share-Based Payment Awards**

718-10-S45-2 See paragraph 480-10-S99-3A, SEC Staff Announcement: Classification and Measurement of Redeemable Securities, for SEC Staff views on classification of certain employee share-based payment awards with redemption features.

718-10-S50 Disclosure

General Note: The Disclosure Section provides guidance regarding the disclosure in the notes to financial statements. In some cases, disclosure may relate to disclosure on the face of the financial statements.

General

> **Disclosures Upon Becoming a Public Entity**

718-10-S50-1 See paragraph 718-10-S99-1, SAB Topic 14.B, Question 4, for SEC Staff views on appropriate disclosures upon becoming a public entity in addition to those prescribed by paragraphs 718-10-50-1 through 50-4.

> **Changes in Valuation Technique or Model Used to Value Instruments**

718-10-S50-2 See paragraph 718-10-S99-1, SAB Topic 14.C, Question 3, for SEC Staff views on disclosures pertaining to a change in valuation technique or model used to value instruments.

> **Changes in Assumptions Used in Valuation Models**

718-10-S50-3 See paragraph 718-10-S99-1, SAB Topic 14.D, for SEC Staff views on disclosures pertaining to changes in assumptions used in valuation models.

> **Expected Volatility Assumptions**

718-10-S50-4 See paragraph 718-10-S99-1, SAB Topic 14.D.1, Question 5, for SEC Staff views on disclosures pertaining to an entity's assumption of expected volatility.

> **Expected Term**

718-10-S50-5 See paragraph 718-10-S99-1, SAB Topic 14.D.2, Question 6, for SEC Staff views on disclosures pertaining to an entity's assumption of expected term.

> **First Time Adoption of Topic 718 in an Interim Period**

718-10-S50-6 See paragraph 718-10-S99-1, SAB Topic 14.H, for SEC Staff views on interim disclosures pertaining to the first time adoption of Topic 718.

> **Modification of Employee Share Options Before Adoption of Topic 718**

718-10-S50-7 See paragraph 718-10-S99-1, SAB Topic 14.K, for SEC Staff views on disclosures pertaining to the modification of significant terms of outstanding awards.

718-10-S55 Implementation Guidance and Illustrations

General Note: The Implementation Guidance and Illustrations Section contains implementation guidance and illustrations that are an integral part of the Subtopic. The implementation guidance and illustrations do not address all possible variations. Users must consider carefully the actual facts and circumstances in relation to the requirements of the Subtopic.

General

> **Accounting Issues Upon Transition from Nonpublic to Public Entity**

718-10-S55-1 See paragraph 718-10-S99-1, SAB Topic 14.B., for SEC Staff views on issues pertaining to the transition from a nonpublic to a public entity.

> **Valuation Methods**

718-10-S55-2 See paragraph 718-10-S99-1, SAB Topic 14.C, for SEC Staff views on the use of valuation techniques or models to estimate fair value.

> Certain Assumptions Used in Valuation Methods

> > Expected Volatility

718-10-S55-3 See paragraph 718-10-S99-1, SAB Topic 14.D.1, for SEC Staff views on the factors to be considered when estimating expected volatility.

> > Expected Term

718-10-S55-4 See paragraph 718-10-S99-1, SAB Topic 14.D.2, for SEC Staff views on factors to be considered when estimating expected term.

> Modification of Employee Share Options Before Adoption of Topic 718

718-10-S55-5 See paragraph 718-10-S99-1, SAB Topic 14.K, for SEC Staff views on the modification of employee share options before the adoption of Topic 718.

> Application of the Measurement Provisions of Topic 718 to Foreign Private Issuers

718-10-S55-6 See paragraph 718-10-S99-1, SAB Topic 14.L, for SEC Staff views on the application of the measurement provisions of Topic 718 to foreign private issuers.

718-10-S60 Relationships

General Note: The Relationships Section contains links to guidance that may be helpful to, but not required by, a user of the Subtopic. This Section may not be all-inclusive. The relationship items are organized according to the Topic structure in the Codification.

General

> Accounting by an Investor for Stock-Based Compensation Granted to Employees of an Equity Method Investee

718-10-S60-1 See paragraph 323-10-S99-4, SEC Observer Comment: Accounting by an Investor for Stock-based Compensation Granted to Employees of an Equity Method Investee, for SEC Staff views on classification by an investor of investor shares issued to employees of an equity method investee.

718-10-S75 XBRL Elements

General Note: This section contains a list of XBRL elements that reference paragraphs in this Subtopic. For additional details regarding changes to the development version of the US GAAP Financial Reporting Taxonomy, refer to the FASB taxonomy review and comment system on the FASB web site.

Allocated Share-based Compensation Expense {4353}
[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *AllocatedShareBasedCompensationExpense*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-1(b)
- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(h)(1)(i)
- 718 Compensation—Stock Compensation > 10 Overall > S99 SEC Materials > General, S99-1(SAB Topic 14.F)

Compensation Related Costs, General [Text Block] {146}
[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *CompensationRelatedCostsGeneralTextBlock*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-1
- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2
- 718 Compensation—Stock Compensation > 10 Overall > S99 SEC Materials > General, S99-1(SAB TOPIC 14.F)

This XBRL element references the following paragraph(s)/term(s) in other Subtopic(s):

- 715 Compensation—Retirement Benefits > 20 Defined Benefit Plans—General > 50 Disclosure > General, 50-1
- 715 Compensation—Retirement Benefits > 70 Defined Contribution Plans > 50 Disclosure > General, 50-1

Disclosure of Compensation Related Costs, Share-based Payments [Text Block] {4303}
[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *DisclosureOfCompensationRelatedCostsShareBasedPaymentsTextBlock*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-1
- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2
- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-4
- 718 Compensation—Stock Compensation > 10 Overall > S99 SEC Materials > General, S99-1(SAB Topic 14)

This XBRL element references the following paragraph(s)/term(s) in other Subtopic(s):

- 718 Compensation—Stock Compensation > 40 Employee Stock Ownership Plans > 50 Disclosure > General, 50-1

Schedule of Employee Service Share-based Compensation, Allocation of Recognized Period Costs [Table Text Block] {1341}
[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *ScheduleOfEmployeeServiceShareBasedCompensationAllocationOfRecognizedPeriodCostsTextBlock*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-1(b)
- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(h)(1)
- 718 Compensation—Stock Compensation > 10 Overall > S99 SEC Materials > General, S99-1(SAB Topic 14.F)

Schedule of Employee Service Share-based Compensation, Allocation of Recognized Period Costs [Table]
[Label and/or reference(s) most recently revised on 12/02/2015 after the last taxonomy release.]
Element Name: *ScheduleOfEmployeeServiceShareBasedCompensationAllocationOfRecognizedPeriodCostsTable*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-1(b)
- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(h)(1)
- 718 Compensation—Stock Compensation > 10 Overall > S99 SEC Materials > General, S99-1(SAB Topic 14.F)

Share-based Compensation Arrangement by Share-based Payment Award, Fair Value Assumptions, Expected Term {3749}
[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *SharebasedCompensationArrangementBySharebasedPaymentAwardFairValueAssumptionsExpectedTerm1*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(f)(2)(i)
- 718 Compensation—Stock Compensation > 10 Overall > S99 SEC Materials > General, S99-1(SAB Topic 14.D.2)

Share-based Compensation Arrangement by Share-based Payment Award, Fair Value Assumptions, Expected Term, Simplified Method {36}
[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *ShareBasedCompensationArrangementByShareBasedPaymentAwardFairValueAssumptionsExpectedTermSimplifiedMethod*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(f)(2)(i)
- 718 Compensation—Stock Compensation > 10 Overall > S99 SEC Materials > General, S99-1(SAB Topic 14.D.2.Q6)

Share-based Goods and Nonemployee Services Transaction, Capitalized Cost {17}
[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *ShareBasedGoodsAndNonemployeeServicesTransactionCapitalizedCost*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2(h)(1)(ii)
- 718 Compensation—Stock Compensation > 10 Overall > S99 SEC Materials > General, S99-1(SAB Topic 14.I)

718-10-S99 SEC Materials

General Note: As more fully described in *About the Codification*, the Codification includes selected SEC and SEC Staff content for reference by public companies. The Codification does not replace or affect how the SEC or SEC Staff issues or updates SEC content. SEC Staff content does not constitute Commission-approved rules or interpretations of the SEC.

General

> SEC Staff Guidance

> > Staff Accounting Bulletins

> > > SAB Topic 14, Share-Based Payment

718-10-S99-1 The following is the text of SAB Topic 14, Share-Based Payment.

The interpretations in this SAB express views of the staff regarding the interaction between FASB ASC Topic 718, Compensation—Stock Compensation, and certain SEC rules and regulations and provide the staff's views regarding the valuation of share-based payment arrangements for public companies. FASB ASC Topic 718 is based on the underlying accounting principle that compensation cost resulting from share-based payment transactions be recognized in financial statements at fair value. FN1 Recognition of compensation cost at fair value will provide investors and other users of financial statements with more complete and comparable financial information. FN2

FN1 FASB ASC paragraphs 718-10-30-2 through 718-10-30-4.

FN2 [Original footnote removed by SAB 114.]

FASB ASC Topic 718 addresses a wide range of share-based compensation arrangements including share options, restricted share plans, performance-based awards, share appreciation rights, and employee share purchase plans.

FASB ASC Topic 718 replaces guidance as originally issued in 1995, that established as preferable, but did not require, a fair-value-based method of accounting for share-based payment transactions with employees.

The staff believes the guidance in this SAB will assist issuers in their initial implementation of FASB ASC Topic 718 and enhance the information received by investors and other users of financial statements, thereby assisting them in making investment and other decisions. This SAB includes interpretive guidance related to share-based payment transactions with nonemployees, the transition from nonpublic to public entity FN3 status, valuation methods (including assumptions such as expected volatility and expected term), the accounting for certain redeemable financial instruments issued under share-based payment arrangements, the classification of compensation expense, non-GAAP financial measures, first-time adoption of FASB ASC Topic 718 in an interim period, capitalization of compensation cost related to share-based payment arrangements, the accounting for income tax effects of share-based payment arrangements upon adoption of FASB ASC Topic 718, the modification of employee share options prior to adoption of FASB ASC Topic 718 and disclosures in MD&A subsequent to adoption of FASB ASC Topic 718.

FN3 Defined in the FASB ASC Master Glossary.

The staff recognizes that there is a range of conduct that a reasonable issuer might use to make estimates and valuations and otherwise implement FASB ASC Topic 718, and the interpretive guidance provided by this SAB, particularly during the period of the Topic's initial implementation. Thus, throughout this SAB the use of the terms "reasonable" and "reasonably" is not meant to imply a single conclusion or methodology, but to encompass the full range of potential conduct, conclusions or methodologies upon which an issuer may reasonably base its valuation decisions. Different conduct, conclusions or methodologies by different issuers in a given situation does not of itself raise an inference that any of those issuers is acting unreasonably. While the zone of reasonable conduct is not unlimited, the staff expects that it will be rare when there is only one acceptable choice in estimating the fair value of share-based payment arrangements under the provisions of FASB ASC Topic 718 and the interpretive guidance provided by this SAB in any given situation. In addition, as discussed in the Interpretive Response to Question 1 of Section C, Valuation Methods, estimates of fair value are not intended to predict actual future events, and subsequent events are not indicative of the reasonableness of the original estimates of fair value made under FASB ASC Topic 718. Over time, as issuers and accountants gain more experience in applying FASB ASC Topic 718 and the guidance provided in this SAB, the staff anticipates that particular approaches may begin to emerge as best practices and that the range of reasonable conduct, conclusions and methodologies will likely narrow.

SAB Topic 14.A, Share-based Payment Transactions with Nonemployees

Question: Are share-based payment transactions with nonemployees included in the scope of FASB ASC Topic 718?

Interpretive Response: Only certain aspects of the accounting for share-based payment transactions with nonemployees are explicitly addressed by FASB ASC Topic 718. This Topic explicitly:

Establishes fair value as the measurement objective in accounting for all share-based payments; FN4 and

FN4 FASB ASC paragraph 718-10-30-2.

Requires that an entity record the value of a transaction with a nonemployee based on the more reliably measurable fair value of either the good or service received or the equity instrument issued. FN5

FN5 Ibid.

FASB ASC Topic 718 does not supersede any of the authoritative literature that specifically addresses accounting for share-based payments with nonemployees. For example, FASB ASC Topic 718 does not specify the measurement date for share-based payment transactions with nonemployees when the measurement of the transaction is based on the fair value of the equity instruments issued. FN6 For determining the measurement date of equity instruments issued in share-based transactions with nonemployees, a company should refer to FASB ASC Subtopic 505-50, Equity—Equity-Based Payments to Non-Employees.

FN6 [Original footnote removed by SAB 114.]

With respect to questions regarding nonemployee arrangements that are not specifically addressed in other authoritative literature, the staff believes that the application of guidance in FASB ASC Topic 718 would generally result in relevant and reliable financial statement information. As such, the staff believes it would generally be appropriate for entities to apply the guidance in FASB ASC Topic 718 by analogy to share-based payment transactions with nonemployees unless other authoritative accounting literature more clearly addresses the appropriate accounting, or the application of the guidance in FASB ASC Topic 718 would be inconsistent with the terms of the instrument issued to a nonemployee in a share-based payment arrangement. FN7 For example, the staff believes the guidance in FASB ASC Topic 718 on certain transactions with related parties or other holders of an economic interest in the entity would generally be applicable to share-based payment transactions with nonemployees. The staff encourages registrants that have additional questions related to accounting for share-based payment transactions with nonemployees to discuss those questions with the staff.

FN7 For example, due to the nature of specific terms in employee share options, including nontransferability, nonhedgability and the truncation of the contractual term due to post-vesting service termination, FASB ASC Topic 718 requires that when valuing an employee share option under the Black-Scholes-Merton framework, the fair value of an employee share option be based on the options expected term rather than the contractual term. If these features (i. e., nontransferability, nonhedgability and the truncation of the contractual term) were not present in a nonemployee share option arrangement, the use of an expected term assumption shorter than the contractual term would generally not be appropriate in estimating the fair value of the nonemployee share options.

SAB Topic 14.B, Transition from Nonpublic to Public Entity Status

Facts: Company A is a nonpublic entity FN8 that first files a registration statement with the SEC to register its equity securities for sale in a public market on January 2, 20X8. FN9 As a nonpublic entity, Company A had been assigning value to its share options FN10 under the calculated value method prescribed by FASB ASC Topic 718, Compensation—Stock Compensation, FN11 and had elected to measure its liability awards based on intrinsic value. Company A is considered a public entity on January 2, 20X8 when it makes its initial filing with the SEC in preparation for the sale of its shares in a public market.

FN8 Defined in the FASB ASC Master Glossary.

FN9 For the purposes of these illustrations, assume all of Company A's equity-based awards granted to its employees were granted after the adoption of FASB ASC Topic 718.

FN10 For purposes of this staff accounting bulletin, the phrase "share options" is used to refer to "share options or similar instruments."

FN11 FASB ASC paragraph 718-10-30-20 requires a nonpublic entity to use the calculated value method when it is not able to reasonably estimate the fair value of its equity share options and similar instruments because it is not practicable for it to estimate the expected volatility of its share price. FASB ASC paragraph 718-10-55-51 indicates that a nonpublic entity may be able to identify similar public entities for which share or option price information is available and may consider the historical, expected, or implied volatility of those entities share prices in estimating expected volatility. The staff would expect an entity that becomes a public entity and had previously measured its share options under the calculated value method to be able to support its previous decision to use calculated value and to provide the disclosures required by FASB ASC subparagraph 718-10-50-2(f)(2)(ii).

Question 1: How should Company A account for the share options that were granted to its employees prior to January 2, 20X8 for which the requisite service has not been rendered by January 2, 20X8?

Interpretive Response: Prior to becoming a public entity, Company A had been assigning value to its share options under the calculated value method. The staff believes that Company A should continue to follow that approach for those share options that were granted prior to January 2, 20X8, unless those share options are subsequently modified, repurchased or cancelled. FN12 If the share options are subsequently modified, repurchased or cancelled, Company A would assess the event under the public company provisions of FASB ASC Topic 718. For example, if Company A modified the share options on February 1, 20X8, any incremental compensation cost would be measured under FASB ASC subparagraph 718-20-35-3(a), as the fair value of the modified share options over the fair value of the original share options measured immediately before the terms were modified. FN13

FN12 This view is consistent with the FASB's basis for rejecting full retrospective application of FASB ASC Topic 718 as described in the basis for conclusions of Statement 123R, paragraph B251.

FN13 FASB ASC paragraph 718-20-55-94. The staff believes that because Company A is a public entity as of the date of the modification, it would be inappropriate to use the calculated value method to measure the original share options immediately before the terms were modified.

Question 2: How should Company A account for its liability awards granted to its employees prior to January 2, 20X8 which are fully vested but have not been settled by January 2, 20X8?

Interpretive Response: As a nonpublic entity, Company A had elected to measure its liability awards subject to FASB ASC Topic 718 at intrinsic value. FN14 When Company A becomes a public entity, it should measure the liability awards at their fair value determined in accordance with FASB ASC Topic 718. FN15 In that reporting period there will be an incremental amount of measured cost for the difference between fair value as determined under FASB ASC Topic 718 and intrinsic value. For example, assume the intrinsic value in the period ended December 31, 20X7 was $10 per award. At the end of the first reporting period ending after January 2, 20X8 (when Company A becomes a public entity), assume the intrinsic value of the award is $12 and the fair value as determined in accordance with FASB ASC Topic 718 is $15. The measured cost in the first reporting period after December 31, 20X7 would be $5. FN16

FN14 FASB ASC paragraph 718-30-30-2.

FN15 FASB ASC paragraph 718-30-35-3.

FN16 $15 fair value less $10 intrinsic value equals $5 of incremental cost.

Question 3: After becoming a public entity, may Company A retrospectively apply the fair-value-based method to its awards that were granted prior to the date Company A became a public entity?

Interpretive Response: No. Before becoming a public entity, Company A did not use the fair-value-based method for either its share options or its liability awards granted to the Company's employees. The staff does not believe it is appropriate for Company A to apply the fair-value-based method on a retrospective basis, because it would require the entity to make estimates of a prior period, which, due to hindsight, may vary significantly from estimates that would have been made contemporaneously in prior periods. FN17

FN17 This view is consistent with the FASB's basis for rejecting full retrospective application of FASB ASC Topic 718 as described in the basis for conclusions of Statement 123R, paragraph B251.

Question 4: Upon becoming a public entity, what disclosures should Company A consider in addition to those prescribed by FASB ASC Topic 718? FN18

FN18 FASB ASC Section 718-10-50.

Interpretive Response: In the registration statement filed on January 2, 20X8, Company A should clearly describe in MD&A the change in accounting policy that will be required by FASB ASC Topic 718 in subsequent periods and the reasonably likely material future effects. FN19 In subsequent filings, Company A should provide financial statement disclosure of the effects of the changes in accounting policy. In addition, Company A should consider the applicability of SEC Release No. FR-60 FN20 and Section V, "Critical Accounting Estimates," in SEC Release No. FR-72 FN21 regarding critical accounting policies and estimates in MD&A.

FN19 See generally SEC Release No. FR-72, "Commission Guidance Regarding Management's Discussion and Analysis of Financial Condition and Results of Operations."

FN20 SEC Release No. FR-60, "Cautionary Advice Regarding Disclosure About Critical Accounting Policies."

FN21 SEC Release No. FR-72, "Commission Guidance Regarding Management's Discussion and Analysis of Financial Condition and Results of Operations."

SAB Topic 14.C, Valuation Methods

FASB ASC paragraph 718-10-30-6 (Compensation—Stock Compensation Topic) indicates that the measurement objective for equity instruments awarded to employees is to estimate at the grant date the fair value of the equity instruments the entity is obligated to issue when employees have rendered the requisite service and satisfied any other conditions necessary to earn the right to benefit from the instruments. The Topic also states that observable market prices of identical or similar equity or liability instruments in active markets are the best evidence of fair value and, if available, should be used as the basis for the measurement for equity and liability instruments awarded in a share-based payment transaction with employees. FN22 However, if observable market prices of identical or similar equity or liability instruments are not available, the fair value shall be estimated by using a valuation technique or model that complies with the measurement objective, as described in FASB ASC Topic 718. FN23

FN22 FASB ASC paragraph 718-10-55-10.

FN23 FASB ASC paragraph 718-10-55-11.

Question 1: If a valuation technique or model is used to estimate fair value, to what extent will the staff consider a company's estimates of fair value to be materially misleading because the estimates of fair value do not correspond to the value ultimately realized by the employees who received the share options?

Interpretive Response: The staff understands that estimates of fair value of employee share options, while derived from expected value calculations, cannot predict actual future events. FN24 The estimate of fair value represents the measurement of the cost of the employee services to the company. The estimate of fair value should reflect the assumptions marketplace participants would use in determining how much to pay for an instrument on the date of the measurement (generally the grant date for equity awards). For example, valuation techniques used in estimating the fair value of employee share options may consider information about a large number of possible share price paths, while, of course, only one share price path will ultimately emerge. If a company makes a good faith fair value estimate in accordance with the provisions of FASB ASC Topic 718 in a way that is designed to take into account the assumptions that underlie the instruments value that marketplace participants would reasonably make, then subsequent future events that affect the instruments value do not provide meaningful information about the quality of the original fair value estimate. As long as the share options were originally so measured, changes in an employee share options value, no matter how significant, subsequent to its grant date do not call into question the reasonableness of the grant date fair value estimate.

FN24 FASB ASC paragraph 718-10-55-15, states "The fair value of those instruments at a single point in time is not a forecast of what the estimated fair value of those instruments may be in the future."

Question 2: In order to meet the fair value measurement objective in FASB ASC Topic 718, are certain valuation techniques preferred over others?

Interpretive Response: FASB ASC paragraph 718-10-55-17 clarifies that the Topic does not specify a preference for a particular valuation technique or model. As stated in FASB ASC paragraph 718-10-55-11 in order to meet the fair value measurement objective, a company should select a valuation technique or model that (a) is applied in a manner consistent with the fair value measurement objective and other requirements of FASB ASC Topic 718, (b) is based on established principles of financial economic theory and generally applied in that field and (c) reflects all substantive characteristics of the instrument.

The chosen valuation technique or model must meet all three of the requirements stated above. In valuing a particular instrument, certain techniques or models may meet the first and second criteria but may not meet the third criterion because the techniques or models are not designed to reflect certain characteristics contained in the instrument. For example, for a share option in which the exercisability is conditional on a specified increase in the price of the underlying shares, the Black-Scholes-Merton closed-form model would not generally be an appropriate valuation model because, while it meets both the first and second criteria, it is not designed to take into account that type of market condition. FN25

FN25 See FASB ASC paragraphs 718-10-55-16 and 718-10-55-20.

Further, the staff understands that a company may consider multiple techniques or models that meet the fair value measurement objective before making its selection as to the appropriate technique or model. The staff would not object to a company's choice of a technique or model as long as the technique or model meets the fair value measurement objective. For example, a company is not required to use a lattice model simply because that model was the most complex of the models the company considered.

Question 3: In subsequent periods, may a company change the valuation technique or model chosen to value instruments with similar characteristics? FN26

FN26 FASB ASC paragraph 718-10-55-17 indicates that an entity may use different valuation techniques or models for instruments with different characteristics.

Interpretive Response: As long as the new technique or model meets the fair value measurement objective as described in Question 2 above, the staff would not object to a company changing its valuation technique or model. FN27 A change in the valuation technique or model used to meet the fair value measurement objective would not be considered a change in accounting principle. As such, a company would not be required to file a preferability letter from its independent accountants as described in Rule 10-01(b)(6) of Regulation S-X when it changes valuation techniques or models. FN28 However, the staff would not expect that a company would frequently switch between valuation techniques or models, particularly in circumstances where there was no significant variation in the form of share-based payments being valued. Disclosure in the footnotes of the basis for any change in technique or model would be appropriate. FN29

FN27 The staff believes that a company should take into account the reason for the change in technique or model in determining whether the new technique or model meets the fair value measurement objective. For example, changing a technique or model from period to period for the sole purpose of lowering the fair value estimate of a share option would not meet the fair value measurement objective of the Topic.

FN28 FASB ASC paragraph 718-10-55-27.

FN29 See generally FASB ASC paragraph 718-10-50-1.

Question 4: Must every company that issues share options or similar instruments hire an outside third party to assist in determining the fair value of the share options?

Interpretive Response: No. However, the valuation of a company's share options or similar instruments should be performed by a person with the requisite expertise.

SAB Topic 14.D, Certain Assumptions Used in Valuation Methods

FASB ASC Topic 718's (Compensation—Stock Compensation Topic) fair value measurement objective for equity instruments awarded to employees is to estimate the grant-date fair value of the equity instruments that the entity is obligated to issue when employees have rendered the requisite service and satisfied any other conditions necessary to earn the right to benefit from the instruments. FN30 In order to meet this fair value measurement objective, management will be required to develop estimates regarding the expected volatility of its company's share price and the exercise behavior of its employees. The staff is providing guidance in the following sections related to the expected volatility and expected term assumptions to assist public entities in applying those requirements.

FN30 FASB ASC paragraph 718-10-55-4.

The staff understands that companies may refine their estimates of expected volatility and expected term as a result of the guidance provided in FASB ASC Topic 718 and in sections (1) and (2) below. Changes in assumptions during the periods presented in the financial statements should be disclosed in the footnotes. FN31

FN31 FASB ASC paragraph 718-10-50-2.

1. Expected Volatility

FASB ASC paragraph 718-10-55-36 states, "Volatility is a measure of the amount by which a financial variable, such as share price, has fluctuated (historical volatility) or is expected to fluctuate (expected volatility) during a period. Option-pricing models require an estimate of expected volatility as an assumption because an options value is dependent on potential share returns over the options term. The higher the volatility, the more the returns on the share can be expected to vary—up or down. Because an options value is unaffected by expected negative returns on the shares, other things [being] equal, an option on a share with higher volatility is worth more than an option on a share with lower volatility."

Facts: Company B is a public entity whose common shares have been publicly traded for over twenty years. Company B also has multiple options on its shares outstanding that are traded on an exchange ("traded options"). Company B grants share options on January 2, 20X6.

Question 1: What should Company B consider when estimating expected volatility for purposes of measuring the fair value of its share options?

Interpretive Response: FASB ASC Topic 718 does not specify a particular method of estimating expected volatility. However, the Topic does clarify that the objective in estimating expected volatility is to ascertain the assumption about expected volatility that marketplace participants would likely use in determining an exchange price for an option. FN32 FASB ASC Topic 718 provides a list of factors entities should consider in estimating expected volatility. FN33 Company B may begin its process of estimating expected volatility by considering its historical volatility. FN34 However, Company B should also then consider, based on available information, how the expected volatility of its share price may differ from historical volatility. FN35 Implied volatility FN36 can be useful in estimating expected volatility because it is generally reflective of both historical volatility and expectations of how future volatility will differ from historical volatility.

FN32 FASB ASC paragraph 718-10-55-35.

FN33 FASB ASC paragraph 718-10-55-37.

FN34 FASB ASC paragraph 718-10-55-40.

FN35 Ibid.

FN36 Implied volatility is the volatility assumption inherent in the market prices of a company's traded options or other financial instruments that have option-like features. Implied volatility is derived by entering the market price of the traded financial instrument, along with assumptions specific to the financial options being valued, into a model based on a constant volatility estimate (e. g., the Black-Scholes-Merton closed-form model) and solving for the unknown assumption of volatility.

The staff believes that companies should make good faith efforts to identify and use sufficient information in determining whether taking historical volatility, implied volatility or a combination of both into account will result in the best estimate of expected volatility. The staff believes companies that have appropriate traded financial instruments from which they can derive an implied volatility should generally consider this measure. The extent of the ultimate reliance on implied volatility will depend on a company's facts and circumstances; however, the staff believes that a company with actively traded options or other financial instruments with embedded options FN37 generally could place greater (or even exclusive) reliance on implied volatility. (See the Interpretive Responses to Questions 3 and 4 below.)

FN37 The staff believes implied volatility derived from embedded options can be utilized in determining expected volatility if, in deriving the implied volatility, the company considers all relevant features of the instruments (e. g., value of the host instrument, value of the option, etc.). The staff believes the derivation of implied volatility from other than simple instruments (e. g., a simple convertible bond) can, in some cases, be impracticable due to the complexity of multiple features.

The process used to gather and review available information to estimate expected volatility should be applied consistently from period to period. When circumstances indicate the availability of new or different information that would be useful in estimating expected volatility, a company should incorporate that information.

Question 2: What should Company B consider if computing historical volatility? FN38

FN38 See FASB ASC paragraph 718-10-55-37.

Interpretive Response: The following should be considered in the computation of historical volatility:

1. Method of Computing Historical Volatility

The staff believes the method selected by Company B to compute its historical volatility should produce an estimate that is representative of Company B's expectations about its future volatility over the expected (if using a Black-Scholes-Merton closed-form model) or contractual (if using a lattice model) term FN39 of its employee share options. Certain methods may not be appropriate for longer term employee share options if they weight the most recent periods of Company B's historical volatility much more heavily than earlier periods. FN40 For example, a method that applies a factor to certain historical price intervals to reflect a decay or loss of relevance of that historical information emphasizes the most recent historical periods and thus would likely bias the estimate to this recent history. FN41

FN39 For purposes of this staff accounting bulletin, the phrase *expected or contractual term, as applicable* has the same meaning as the phrase *expected (if using a Black-Scholes-Merton closed-form model) or contractual (if using a lattice model) term of an employee share option*.

FN40 FASB ASC subparagraph 718-10-55-37(a) states that entities should consider historical volatility over a period generally commensurate with the expected or contractual term, as applicable, of the share option. Accordingly, the staff believes methods that place extreme emphasis on the most recent periods may be inconsistent with this guidance.

FN41 Generalized Autoregressive Conditional Heteroskedasticity (GARCH) is an example of a method that demonstrates this characteristic.

2. Amount of Historical Data

FASB ASC subparagraph 718-10-55-37(a) indicates entities should consider historical volatility over a period generally commensurate with the expected or contractual term, as applicable, of the share option. The staff believes Company B could utilize a period of historical data longer than the expected or contractual term, as applicable, if it reasonably believes the additional historical information will improve the estimate. For example, assume Company B decided to utilize a Black-Scholes-Merton closed-form model to estimate the value of the share options granted on January 2, 20X6 and determined that the expected term was six years. Company B would not be precluded from using historical data longer than six years if it concludes that data would be relevant.

3. Frequency of Price Observations

FASB ASC subparagraph 718-10-55-37(d) indicates an entity should use appropriate and regular intervals for price observations based on facts and circumstances that provide the basis for a reasonable fair value estimate. Accordingly, the staff believes Company B should consider the frequency of the trading of its shares and the length of its trading history in determining the appropriate frequency of price observations. The staff believes using daily, weekly or monthly price observations may provide a sufficient basis to estimate expected volatility if the history provides enough data points on which to base the estimate. FN42 Company B should select a consistent point in time within each interval when selecting data points. FN43

FN42 Further, if shares of a company are thinly traded the staff believes the use of weekly or monthly price observations would generally be more appropriate than the use of daily price observations. The volatility calculation using daily observations for such shares could be artificially inflated due to a larger spread between the bid and asked quotes and lack of consistent trading in the market.

FN43 FASB ASC paragraph 718-10-55-40 states that a company should establish a process for estimating expected volatility and apply that process consistently from period to period. In addition, FASB ASC paragraph 718-10-55-27 indicates that assumptions used to estimate the fair value of instruments granted to employees should be determined in a consistent manner from period to period.

4. Consideration of Future Events

The objective in estimating expected volatility is to ascertain the assumptions that marketplace participants would likely use in determining an exchange price for an option. FN44 Accordingly, the staff believes that Company B should consider those future events that it reasonably concludes a marketplace participant would also consider in making the estimation. For example, if Company B has recently announced a merger with a company that would change its business risk in the future, then it should consider the impact of the merger in estimating the expected volatility if it reasonably believes a marketplace participant would also consider this event.

FN44 FASB ASC paragraph 718-10-55-35.

5. Exclusion of Periods of Historical Data

In some instances, due to a company's particular business situations, a period of historical volatility data may not be relevant in evaluating expected volatility. FN45 In these instances, that period should be disregarded. The staff believes that if Company B disregards a period of historical volatility, it should be prepared to support its conclusion that its historical share price during that previous period is not relevant to estimating expected volatility due to one or more discrete and specific historical events and that similar events are not expected to occur during the expected term of the share option. The staff believes these situations would be rare.

FN45 FASB ASC paragraph 718-10-55-37.

Question 3: What should Company B consider when evaluating the extent of its reliance on the implied volatility derived from its traded options?

Interpretive Response: To achieve the objective of estimating expected volatility as stated in FASB ASC paragraphs 718-10-55-35 through 718-10-55-41, the staff believes Company B generally should consider the following in its evaluation:

1) the volume of market activity of the underlying shares and traded options;

2) the ability to synchronize the variables used to derive implied volatility;

3) the similarity of the exercise prices of the traded options to the exercise price of the employee share options; and

4) the similarity of the length of the term of the traded and employee share options. FN46

FN46 See generally Options, Futures, and Other Derivatives by John C. Hull (Prentice Hall, 5th Edition, 2003).

1. Volume of Market Activity

The staff believes Company B should consider the volume of trading in its underlying shares as well as the traded options. For example, prices for instruments in actively traded markets are more likely to reflect a marketplace participants expectations regarding expected volatility.

2. Synchronization of the Variables

Company B should synchronize the variables used to derive implied volatility. For example, to the extent reasonably practicable, Company B should use market prices (either traded prices or the average of bid and asked quotes) of the traded options and its shares measured at the same point in time. This measurement should also be synchronized with the grant of the employee share options; however, when this is not reasonably practicable, the staff believes Company B should derive implied volatility as of a point in time as close to the grant of the employee share options as reasonably practicable.

3. Similarity of the Exercise Prices

The staff believes that when valuing an at-the-money employee share option, the implied volatility derived from at- or near-the-money traded options generally would be most relevant. FN47 If, however, it is not possible to find at- or near-the-money traded options, Company B should select multiple traded options with an average exercise price close to the exercise price of the employee share option. FN48

FN47 Implied volatilities of options differ systematically over the "moneyness" of the option. This pattern of implied volatilities across exercise prices is known as the "volatility smile" or "volatility skew." Studies such as "Implied Volatility" by Stewart Mayhew, Financial Analysts Journal, July-August 1995, have found that implied volatilities based on near-the-money options do as well as sophisticated weighted implied volatilities in estimating expected volatility. In addition, the staff believes that because near-the-money options are generally more actively traded, they may provide a better basis for deriving implied volatility.

FN48 The staff believes a company could use a weighted-average implied volatility based on traded options that are either in-the-money or out-of-the-money. For example, if the employee share option has an exercise price of $52, but the only traded options available have exercise prices of $50 and $55, then the staff believes that it is appropriate to use a weighted average based on the implied volatilities from the two traded options; for this example, a 40% weight on the implied volatility calculated from the option with an exercise price of $55 and a 60% weight on the option with an exercise price of $50.

4. Similarity of Length of Terms

The staff believes that when valuing an employee share option with a given expected or contractual term, as applicable, the implied volatility derived from a traded option with a similar term would be the most relevant. However, if there are no traded options with maturities that are similar to the share options contractual or expected term, as applicable, then the staff believes Company B could consider traded options with a remaining maturity of six months or greater. FN49 However, when using traded options with a term of less than one year, FN50 the staff would expect the company to also consider other relevant information in estimating expected volatility. In general, the staff believes more reliance on the implied volatility derived from a traded option would be expected the closer the remaining term of the traded option is to the expected or contractual term, as applicable, of the employee share option.

FN49 The staff believes it may also be appropriate to consider the entire term structure of volatility provided by traded options with a variety of remaining maturities. If a company considers the entire term structure in deriving implied volatility, the staff would expect a company to include some options in the term structure with a remaining maturity of six months or greater.

FN50 The staff believes the implied volatility derived from a traded option with a term of one year or greater would typically not be significantly different from the implied volatility that would be derived from a traded option with a significantly longer term.

The staff believes Company Bs evaluation of the factors above should assist in determining whether the implied volatility appropriately reflects the markets expectations of future volatility and thus the extent of reliance that Company B reasonably places on the implied volatility.

Question 4: Are there situations in which it is acceptable for Company B to rely exclusively on either implied volatility or historical volatility in its estimate of expected volatility?

Interpretive Response: As stated above, FASB ASC Topic 718 does not specify a method of estimating expected volatility; rather, it provides a list of factors that should be considered and requires that an entity's estimate of expected volatility be reasonable and supportable. FN51 Many of the factors listed in FASB ASC Topic 718 are discussed in Questions 2 and 3 above. The objective of estimating volatility, as stated in FASB ASC Topic 718, is to ascertain the assumption about expected volatility that marketplace participants would likely use in determining a price for an option. FN52 The staff believes that a company, after considering the factors listed in FASB ASC Topic 718, could, in certain situations, reasonably conclude that exclusive reliance on either historical or implied volatility would provide an estimate of expected volatility that meets this stated objective.

FN51 FASB ASC paragraphs 718-10-55-36 through 718-10-55-37.

FN52 FASB ASC paragraph 718-10-55-35.

The staff would not object to Company B placing exclusive reliance on implied volatility when the following factors are present, as long as the methodology is consistently applied:

Company B utilizes a valuation model that is based upon a constant volatility assumption to value its employee share options; FN53

FN53 FASB ASC paragraphs 718-10-55-18 and 718-10-55-39 discuss the incorporation of a range of expected volatilities into option pricing models. The staff believes that a company that utilizes an option pricing model that incorporates a range of expected volatilities over the options contractual term should consider the factors listed in FASB ASC Topic 718, and those discussed in the Interpretive Responses to Questions 2 and 3 above, to determine the extent of its reliance (including exclusive reliance) on the derived implied volatility.

The implied volatility is derived from options that are actively traded;

The market prices (trades or quotes) of both the traded options and underlying shares are measured at a similar point in time to each other and on a date reasonably close to the grant date of the employee share options;

The traded options have exercise prices that are both (a) near-the-money and (b) close to the exercise price of the employee share options; FN54 and

FN54 When near-the-money options are not available, the staff believes the use of a weighted-average approach, as noted in a previous footnote, may be appropriate.

The remaining maturities of the traded options on which the estimate is based are at least one year.

The staff would not object to Company B placing exclusive reliance on historical volatility when the following factors are present, so long as the methodology is consistently applied:

Company B has no reason to believe that its future volatility over the expected or contractual term, as applicable, is likely to differ from its past; FN55

FN55 FASB ASC paragraph 718-10-55-38. A change in a company's business model that results in a material alteration to the company's risk profile is an example of a circumstance in which the company's future volatility would be expected to differ from its past volatility. Other examples may include, but are not limited to, the introduction of a new product that is central to a company's business model or the receipt of U.S. Food and Drug Administration approval for the sale of a new prescription drug.

The computation of historical volatility uses a simple average calculation method;

A sequential period of historical data at least equal to the expected or contractual term of the share option, as applicable, is used; and

A reasonably sufficient number of price observations are used, measured at a consistent point throughout the applicable historical period. FN56

FN56 If the expected or contractual term, as applicable, of the employee share option is less than three years, the staff believes monthly price observations would not provide a sufficient amount of data.

Question 5: What disclosures would the staff expect Company B to include in its financial statements and MD&A regarding its assumption of expected volatility?

Interpretive Response: FASB ASC paragraph 718-10-50-2 prescribes the minimum information needed to achieve the Topic's disclosure objectives. FN57 Under that guidance, Company B is required to disclose the expected volatility and the method used to estimate it. FN58 Accordingly, the staff expects that at a minimum Company B would disclose in a footnote to its financial statements how it determined the expected volatility assumption for purposes of determining the fair value of its share options in accordance with FASB ASC Topic 718. For example, at a minimum, the staff would expect Company B to disclose whether it used only implied volatility, historical volatility, or a combination of both.

FN57 FASB ASC Section 718-10-50.

FN58 FASB ASC subparagraph 718-10-50-2(f)(2)(ii).

In addition, Company B should consider the applicability of SEC Release No. FR-60 and Section V, "Critical Accounting Estimates," in SEC Release No. FR-72 regarding critical accounting policies and estimates in MD&A. The staff would expect such disclosures to include an explanation of the method used to estimate the expected volatility of its share price. This explanation generally should include a discussion of the basis for the company's conclusions regarding the extent to which it used historical volatility, implied volatility or a combination of both. A company could consider summarizing its evaluation of the factors listed in Questions 2 and 3 of this section as part of these disclosures in MD&A.

Facts: Company C is a newly public entity with limited historical data on the price of its publicly traded shares and no other traded financial instruments. Company C believes that it does not have sufficient company specific information regarding the volatility of its share price on which to base an estimate of expected volatility.

Question 6: What other sources of information should Company C consider in order to estimate the expected volatility of its share price?

Interpretive Response: FASB ASC Topic 718 provides guidance on estimating expected volatility for newly public and nonpublic entities that do not have company specific historical or implied volatility information available. FN59 Company C may base its estimate of expected volatility on the historical, expected or implied volatility of similar entities whose share or option prices are publicly available. In making its determination as to similarity, Company C would likely consider the industry, stage of life cycle, size and financial leverage of such other entities. FN60

FN59 FASB ASC paragraphs 718-10-55-25 and 718-10-55-51.

FN60 FASB ASC paragraph 718-10-55-25.

The staff would not object to Company C looking to an industry sector index (e. g., NASDAQ Computer Index) that is representative of Company C's industry, and possibly its size, to identify one or more similar entities. FN61 Once Company C has identified similar entities, it would substitute a measure of the individual volatilities of the similar entities for the expected volatility of its share price as an assumption in its valuation model. FN62 Because of the effects of diversification that are present in an industry sector index, Company C should not substitute the volatility of an index for the expected volatility of its share price as an assumption in its valuation model. FN63

FN61 If a company operates in a number of different industries, it could look to several industry indices. However, when considering the volatilities of multiple companies, each operating only in a single industry, the staff believes a company should take into account its own leverage, the leverages of each of the entities, and the correlation of the entities stock returns.

FN62 FASB ASC paragraph 718-10-55-51.

FN63 FASB ASC paragraph 718-10-55-25.

After similar entities have been identified, Company C should continue to consider the volatilities of those entities unless circumstances change such that the identified entities are no longer similar to Company C. Until Company C has sufficient information available, the staff would not object to Company C basing its estimate of expected volatility on the volatility of similar entities for those periods for which it does not have sufficient information available. FN64 Until Company C has either a sufficient amount of historical information regarding the volatility of its share price or other traded financial instruments are available to derive an implied volatility to support an estimate of expected volatility, it should consistently apply a process as described above to estimate expected volatility based on the volatilities of similar entities. FN65

FN64 FASB ASC paragraph 718-10-55-37. The staff believes that at least two years of daily or weekly historical data could provide a reasonable basis on which to base an estimate of expected volatility if a company has no reason to believe that its future volatility will differ materially during the expected or contractual term, as applicable, from the volatility calculated from this past information. If the expected or contractual term, as applicable, of a share option is shorter than two years, the staff believes a company should use daily or weekly historical data for at least the length of that applicable term.

FN65 FASB ASC paragraph 718-10-55-40.

2. Expected Term

FASB ASC paragraph 718-10-55-29 states, "The fair value of a traded (or transferable) share option is based on its contractual term because rarely is it economically advantageous to the holder to exercise, rather than sell, a transferable share option before the end of its contractual term. Employee share options generally differ from transferable [or tradable] share options in that employees cannot sell (or hedge) their share options – they can only exercise them; because of this, employees generally exercise their options before the end of the options contractual term. Thus, the inability to sell or hedge an employee share option effectively reduces the options value [compared to a transferable option] because exercise prior to the options expiration terminates its remaining life and thus its remaining time value." Accordingly, FASB ASC Topic 718 requires that when valuing an employee share option under the Black-Scholes-Merton framework the fair value of employee share options be based on the share options expected term rather than the contractual term.

The staff believes the estimate of expected term should be based on the facts and circumstances available in each particular case. Consistent with our guidance regarding reasonableness immediately preceding Topic 14.A, the fact that other possible estimates are later determined to have more accurately reflected the term does not necessarily mean that the particular choice was unreasonable. The staff reminds registrants of the expected term disclosure requirements described in FASB ASC subparagraph 718-10-50-2(f)(2)(i).

Facts: Company D utilizes the Black-Scholes-Merton closed-form model to value its share options for the purposes of determining the fair value of the options under FASB ASC Topic 718. Company D recently granted share options to its employees. Based on its review of various factors, Company D determines that the expected term of the options is six years, which is less than the contractual term of ten years.

Question 1: When determining the fair value of the share options in accordance with FASB ASC Topic 718, should Company D consider an additional discount for nonhedgability and nontransferability?

Interpretive Response: No. FASB ASC paragraph 718-10-55-29 indicates that nonhedgability and nontransferability have the effect of increasing the likelihood that an employee share option will be exercised before the end of its contractual term. Nonhedgability and nontransferability therefore factor into the expected term assumption (in this case reducing the term assumption from ten years to six years), and the expected term reasonably adjusts for the effect of these factors. Accordingly, the staff believes that no additional reduction in the term assumption or other discount to the estimated fair value is appropriate for these particular factors. FN66

FN66 The staff notes the existence of academic literature that supports the assertion that the Black-Scholes-Merton closed-form model, with expected term as an input, can produce reasonable estimates of fair value. Such literature includes J. Carpenter, "The exercise and valuation of executive stock options," Journal of Financial Economics, May 1998, pp.127-158; C. Marquardt, "The Cost of Employee Stock Option Grants: An Empirical Analysis," Journal of Accounting Research, September 2002, p. 1191-1217); and J. Bettis, J. Bizjak and M. Lemmon, "Exercise behavior, valuation, and the incentive effect of employee stock options," Journal of Financial Economics, forthcoming, 2005.

Question 2: Should forfeitures or terms that stem from forfeitability be factored into the determination of expected term?

Interpretive Response: No. FASB ASC Topic 718 indicates that the expected term that is utilized as an assumption in a closed-form option-pricing model or a resulting output of a lattice option pricing model when determining the fair value of the share options should not incorporate restrictions or other terms that stem from the pre-vesting forfeitability of the instruments. Under FASB ASC Topic 718, these pre-vesting restrictions or other terms are taken into account by ultimately recognizing compensation cost only for awards for which employees render the requisite service. FN67.

FN67 FASB ASC paragraph 718-10-30-11.

Question 3: Can a company's estimate of expected term ever be shorter than the vesting period?

Interpretive Response: No. The vesting period forms the lower bound of the estimate of expected term. FN68

FN68 FASB ASC paragraph 718-10-55-31.

Question 4: FASB ASC paragraph 718-10-55-34, indicates that an entity shall aggregate individual awards into relatively homogenous groups with respect to exercise and post-vesting employment termination behaviors for the purpose of determining expected term, regardless of the valuation technique or model used to estimate the fair value. How many groupings are typically considered sufficient?

Interpretive Response: As it relates to employee groupings, the staff believes that an entity may generally make a reasonable fair value estimate with as few as one or two groupings. FN69

FN69 The staff believes the focus should be on groups of employees with significantly different expected exercise behavior. Academic research suggests two such groups might be executives and non-executives. A study by S. Huddart found executives and other senior managers to be significantly more patient in their exercise behavior than more junior employees. (Employee rank was proxied for by the number of options issued to that employee.) See S. Huddart, "Patterns of stock option exercise in the United States," in: J. Carpenter and D. Yermack, eds., Executive Compensation and Shareholder Value: Theory and Evidence (Kluwer, Boston, MA, 1999), pp. 115-142. See also S. Huddart and M. Lang, "Employee stock option exercises: An empirical analysis," Journal of Accounting and Economics, 1996, pp. 5-43.

Question 5: What approaches could a company use to estimate the expected term of its employee share options?

Interpretive Response: A company should use an approach that is reasonable and supportable under FASB ASC Topic 718's fair value measurement objective, which establishes that assumptions and measurement techniques should be consistent with those that marketplace participants would be likely to use in determining an exchange price for the share options. FN70 If, in developing its estimate of expected term, a company determines that its historical share option exercise experience is the best estimate of future exercise patterns, the staff will not object to the use of the historical share option exercise experience to estimate expected term. FN71

FN70 FASB ASC paragraph 718-10-55-13.

FN71 Historical share option exercise experience encompasses data related to share option exercise, post-vesting termination, and share option contractual term expiration.

A company may also conclude that its historical share option exercise experience does not provide a reasonable basis upon which to estimate expected term. This may be the case for a variety of reasons, including, but not limited to, the life of the company and its relative stage of development, past or expected structural changes in the business, differences in terms of past equity-based share option grants, FN72 or a lack of variety of price paths that the company may have experienced. FN73

FN72 For example, if a company had historically granted share options that were always in-the-money, and will grant at-the-money options prospectively, the exercise behavior related to the in-the-money options may not be sufficient as the sole basis to form the estimate of expected term for the at-the-money grants.

FN73 For example, if a company had a history of previous equity-based share option grants and exercises only in periods in which the company's share price was rising, the exercise behavior related to those options may not be sufficient as the sole basis to form the estimate of expected term for current option grants.

FASB ASC Topic 718 describes other alternative sources of information that might be used in those cases when a company determines that its historical share option exercise experience does not provide a reasonable basis upon which to estimate expected term. For example, a lattice model (which by definition incorporates multiple price paths) can be used to estimate expected term as an input into a Black-Scholes-Merton closed-form model. FN74 In addition, FASB ASC paragraph 718-10-55-32 states "…expected term might be estimated in some other manner, taking into account whatever relevant and supportable information is available, including industry averages and other pertinent evidence such as published academic research." For example, data about exercise patterns of employees in similar industries and/or situations as the company's might be used. While such comparative information may not be widely available at present, the staff understands that various parties, including actuaries, valuation professionals and others are gathering such data.

FN74 FASB ASC paragraph 718-10-55-30.

Facts: Company E grants equity share options to its employees that have the following basic characteristics: FN75.

FN75 Employee share options with these features are sometimes referred to as plain-vanilla options.

The share options are granted at-the-money;

Exercisability is conditional only on performing service through the vesting date; FN76

FN76 In this fact pattern the requisite service period equals the vesting period.

If an employee terminates service prior to vesting, the employee would forfeit the share options;

If an employee terminates service after vesting, the employee would have a limited time to exercise the share options (typically 30-90 days); and

The share options are nontransferable and nonhedgeable.

Company E utilizes the Black-Scholes-Merton closed-form model for valuing its employee share options.

Question 6: As share options with these plain-vanilla characteristics have been granted in significant quantities by many companies in the past, is the staff aware of any simple methodologies that can be used to estimate expected term?

Interpretive Response: As noted above, the staff understands that an entity that is unable to rely on its historical exercise data may find that certain alternative information, such as exercise data relating to employees of other companies, is not easily obtainable. As such, some companies may encounter difficulties in making a refined estimate of expected term. Accordingly, if a company concludes that its historical share option exercise experience does not provide a reasonable basis upon which to estimate expected term, the staff will accept the following simplified method for plain vanilla options consistent with those in the fact set above: expected term = ((vesting term + original contractual term) / 2). Assuming a ten year original contractual term and graded vesting over four years (25% of the options in each grant vest annually) for the share options in the fact set described above, the resultant expected term would be 6.25 years. FN77 Academic research on the exercise of options issued to executives provides some general support for outcomes that would be produced by the application of this method. FN78

FN77 Calculated as [[[1 year vesting term (for the first 25% vested) plus 2 year vesting term (for the second 25% vested) plus 3 year vesting term (for the third 25% vested) plus 4 year vesting term (for the last 25% vested)] divided by 4 total years of vesting] plus 10 year contractual life] divided by 2; that is, (((1+2+3+4)/4) + 10) /2 = 6.25 years.

FN78 J.N. Carpenter, "The exercise and valuation of executive stock options," Journal of Financial Economics, 1998, pp.127-158 studies a sample of 40 NYSE and AMEX firms over the period 1979-1994 with share option terms reasonably consistent to the terms presented in the fact set and example. The mean time to exercise after grant was 5.83 years and the median was 6.08 years. The "mean time to exercise" is shorter than expected term since the study's sample included only exercised options. Other research on executive options includes (but is not limited to) J. Carr Bettis; John M. Bizjak; and Michael L. Lemmon, "Exercise behavior, valuation, and the incentive effects of employee stock options," forthcoming in the Journal of Financial Economics. One of the few studies on nonexecutive employee options the staff is aware of is S. Huddart, "Patterns of stock option exercise in the United States," in: J. Carpenter and D. Yermack, eds., Executive Compensation and Shareholder Value: Theory and Evidence (Kluwer, Boston, MA, 1999), pp. 115-142.

Examples of situations in which the staff believes that it may be appropriate to use this simplified method include the following:

A company does not have sufficient historical exercise data to provide a reasonable basis upon which to estimate expected term due to the limited period of time its equity shares have been publicly traded.

A company significantly changes the terms of its share option grants or the types of employees that receive share option grants such that its historical exercise data may no longer provide a reasonable basis upon which to estimate expected term.

A company has or expects to have significant structural changes in its business such that its historical exercise data may no longer provide a reasonable basis upon which to estimate expected term.

The staff understands that a company may have sufficient historical exercise data for some of its share option grants but not for others. In such cases, the staff will accept the use of the simplified method for only some but not all share option grants. The staff also does not believe that it is necessary for a company to consider using a lattice model before it decides that it is eligible to use this simplified method. Further, the staff will not object to the use of this simplified method in periods prior to the time a company's equity shares are traded in a public market.

If a company uses this simplified method, the company should disclose in the notes to its financial statements the use of the method, the reason why the method was used, the types of share option grants for which the method was used if the method was not used for all share option grants, and the periods for which the method was used if the method was not used in all periods. Companies that have sufficient historical share option exercise experience upon which to estimate expected term may not apply this simplified method. In addition, this simplified method is not intended to be applied as a benchmark in evaluating the appropriateness of more refined estimates of expected term.

Also, as noted above in Question 5, the staff believes that more detailed external information about exercise behavior will, over time, become readily available to companies. As such, the staff does not expect that such a simplified method would be used for share option grants when more relevant detailed information becomes widely available.

SAB Topic 14.E, FASB ASC Topic 718, Compensation—Stock Compensation, and Certain Redeemable Financial Instruments

Certain financial instruments awarded in conjunction with share-based payment arrangements have redemption features that require settlement by cash or other assets upon the occurrence of events that are outside the control of the issuer. FN79 FASB ASC Topic 718 provides guidance for determining whether instruments granted in conjunction with share-based payment arrangements should be classified as liability or equity instruments. Under that guidance, most instruments with redemption features that are outside the control of the issuer are required to be classified as liabilities; however, some redeemable instruments will qualify for equity classification. FN80 SEC Accounting Series Release No. 268, Presentation in Financial Statements of "Redeemable Preferred Stocks," FN81 ("ASR 268") and related guidance FN82 address the classification and measurement of certain redeemable equity instruments.

FN79 The terminology outside the control of the issuer is used to refer to any of the three redemption conditions described in Rule 5-02.28 of Regulation S-X that would require classification outside permanent equity. That rule requires preferred securities that are redeemable for cash or other assets to be classified outside of permanent equity if they are redeemable (1) at a fixed or determinable price on a fixed or determinable date, (2) at the option of the holder, or (3) upon the occurrence of an event that is not solely within the control of the issuer.

FN80 FASB ASC paragraphs 718-10-25-6 through 718-10-25-19.

FN81 ASR 268, July 27, 1979, Rule 5-02.28 of Regulation S-X.

FN82 Related guidance includes FASB ASC paragraph 480-10-S99-3A (Distinguishing Liabilities from Equity Topic).

Facts: Under a share-based payment arrangement, Company F grants to an employee shares (or share options) that all vest at the end of four years (cliff vest). The shares (or shares underlying the share options) are redeemable for cash at fair value at the holder's option, but only after six months from the date of share issuance (as defined in FASB ASC Topic 718). Company F has determined that the shares (or share options) would be classified as equity instruments under the guidance of FASB ASC Topic 718. However, under ASR 268 and related guidance, the instruments would be considered to be redeemable for cash or other assets upon the occurrence of events (e. g., redemption at the option of the holder) that are outside the control of the issuer.

Question 1: While the instruments are subject to FASB ASC Topic 718, FN83 is ASR 268 and related guidance applicable to instruments issued under share-based payment arrangements that are classified as equity instruments under FASB ASC Topic 718?

FN83 FASB ASC paragraph 718-10-35-13, states that an instrument ceases to be subject to this Topic when "the rights conveyed by the instrument to the holder are no longer dependent on the holder being an employee of the entity (that is, no longer dependent on providing service)."

Interpretive Response: Yes. The staff believes that registrants must evaluate whether the terms of instruments granted in conjunction with share-based payment arrangements with employees that are not classified as liabilities under FASB ASC Topic 718 result in the need to present certain amounts outside of permanent equity (also referred to as being presented in "temporary equity") in accordance with ASR 268 and related guidance. FN84

FN84 Instruments granted in conjunction with share-based payment arrangements with employees that do not by their terms require redemption for cash or other assets (at a fixed or determinable price on a fixed or determinable date, at the option of the holder, or upon the occurrence of an event that is not solely within the control of the issuer) would not be assumed by the staff to require net cash settlement for purposes of applying ASR 268 in circumstances in which FASB ASC Section 815-40-25, Derivatives and Hedging—Contracts in Entity's Own Equity—Recognition, would otherwise require the assumption of net cash settlement. See FASB ASC paragraph 815-40-25-11, which states, in part: "…the events or actions necessary to deliver registered shares are not controlled by an entity and, therefore, except under the circumstances described in FASB ASC paragraph 815-40-25-16, if the contract permits the entity to net share or physically settle the contract only by delivering registered shares, it is assumed that the entity will be required to net cash settle the contract." See also FASB ASC subparagraph 718-10-25-15(a).

When an instrument ceases to be subject to FASB ASC Topic 718 and becomes subject to the recognition and measurement requirements of other applicable GAAP, the staff believes that the company should reassess the classification of the instrument as a liability or equity at that time and consequently may need to reconsider the applicability of ASR 268.

Question 2: How should Company F apply ASR 268 and related guidance to the shares (or share options) granted under the share-based payment arrangements with employees that may be unvested at the date of grant?

Interpretive Response: Under FASB ASC Topic 718, when compensation cost is recognized for instruments classified as equity instruments, additional paid-in-capital FN85 is increased. If the award is not fully vested at the grant date, compensation cost is recognized and additional paid-in-capital is increased over time as services are rendered over the requisite service period. A similar pattern of recognition should be used to reflect the amount presented as temporary equity for share-based payment awards that have redemption features that are outside the issuers control but are classified as equity instruments under FASB ASC Topic 718. The staff believes Company F should present as temporary equity at each balance sheet date an amount that is based on the redemption amount of the instrument, but takes into account the proportion of consideration received in the form of employee services. Thus, for example, if a nonvested share that qualifies for equity classification under FASB ASC Topic 718 is redeemable at fair value more than six months after vesting, and that nonvested share is 75% vested at the balance sheet date, an amount equal to 75% of the fair value of the share should be presented as temporary equity at that date. Similarly, if an option on a share of redeemable stock that qualifies for equity classification under FASB ASC Topic 718 is 75% vested at the balance sheet date, an amount equal to 75% of the intrinsic FN86 value of the option should be presented as temporary equity at that date.

FN85 Depending on the fact pattern, this may be recorded as common stock and additional paid in capital.

FN86 The potential redemption amount of the share option in this illustration is its intrinsic value because the holder would pay the exercise price upon exercise of the option and then, upon redemption of the underlying shares, the company would pay the holder the fair value of those shares. Thus, the net cash outflow from the arrangement would be equal to the intrinsic value of the share option. In situations where there would be no cash inflows from the share option holder, the cash required to be paid to redeem the underlying shares upon the exercise of the put option would be the redemption value.

Question 3: Would the methodology described for employee awards in the Interpretive Response to Question 2 above apply to nonemployee awards to be issued in exchange for goods or services with similar terms to those described above?

Interpretive Response: See Topic 14.A for a discussion of the application of the principles in FASB ASC Topic 718 to nonemployee awards. The staff believes it would generally be appropriate to apply the methodology described in the Interpretive Response to Question 2 above to nonemployee awards.

SAB Topic 14.F, Classification of Compensation Expense Associated with Share-based Payment Arrangements

Facts: Company G utilizes both cash and share-based payment arrangements to compensate its employees and nonemployee service providers. Company G would like to emphasize in its income statement the amount of its compensation that did not involve a cash outlay.

Question: How should Company G present in its income statement the non-cash nature of its expense related to share-based payment arrangements?

Interpretive Response: The staff believes Company G should present the expense related to share-based payment arrangements in the same line or lines as cash compensation paid to the same employees. FN87 The staff believes a company could consider disclosing the amount of expense related to share-based payment arrangements included in specific line items in the financial statements. Disclosure of this information might be appropriate in a parenthetical note to the appropriate income statement line items, on the cash flow statement, in the footnotes to the financial statements, or within MD&A.

FN87 FASB ASC 718 does not identify a specific line item in the income statement for presentation of the expense related to share-based payment arrangements.

(SAB Topics 14.G–14.H Removed by SAB 114)

SAB Topic 14.I, Capitalization of Compensation Cost Associated with Share-Based Arrangements

Facts: Company K is a manufacturing company that grants share options to its production employees. Company K has determined that the cost of the production employees service is an inventoriable cost. As such, Company K is required to initially capitalize the cost of the share option grants to these production employees as inventory and later recognize the cost in the income statement when the inventory is consumed. FN94

FN94 FASB ASC paragraph 718-10-25-2.

Question: If Company K elects to adjust its period end inventory balance for the allocable amount of share-option cost through a period end adjustment to its financial statements, instead of incorporating the share-option cost through its inventory costing system, would this be considered a deficiency in internal controls?

Interpretive Response: No. FASB ASC Topic 718, Compensation—Stock Compensation, does not prescribe the mechanism a company should use to incorporate a portion of share-option costs in an inventory-costing system. The staff believes Company K may accomplish this through a period end adjustment to its financial statements. Company K should establish appropriate controls surrounding the calculation and recording of this period end adjustment, as it would any other period end adjustment. The fact that the entry is recorded as a period end adjustment, by itself, should not impact managements ability to determine that the internal control over financial reporting, as defined by the SEC's rules implementing Section 404 of the Sarbanes-Oxley Act of 2002, FN95 is effective.

FN95 Release No. 34-47986, June 5, 2003, Managements Report on Internal Control Over Financial Reporting and Certification of Disclosure in Exchange Act Period Reports.

(SAB Topics 14.J–14.M Removed by SAB 114)

> > Announcements Made by SEC Staff at Emerging Issues Task Force (EITF) Meetings

> > > SEC Staff Announcement: Escrowed Share Arrangements and the Presumption of Compensation

718-10-S99-2 This SEC staff announcement provides the SEC staff's views regarding Escrowed Share Arrangements and the Presumption of Compensation.

The SEC Observer made the following announcement of the SEC staff's position on escrowed share arrangements. The SEC Observer has been asked to clarify SEC staff views on overcoming the presumption that for certain shareholders these arrangements represent compensation.

Historically, the SEC staff has expressed the view that an escrowed share arrangement involving the release of shares to certain shareholders based on performance-related criteria is presumed to be compensatory, equivalent to a reverse stock split followed by the grant of a restricted stock award under a performance-based plan. FN 1

When evaluating whether the presumption of compensation has been overcome, registrants should consider the substance of the arrangement, including whether the arrangement was entered into for purposes unrelated to, and not contingent upon, continued employment. For example, as a condition of a financing transaction, investors may request that specific significant shareholders, who also may be officers or directors, participate in an escrowed share arrangement. If the escrowed shares will be released or canceled without regard to continued employment, specific facts and circumstances may indicate that the arrangement is in substance an inducement made to facilitate the transaction on behalf of the company, rather than as compensatory. In such cases, the SEC staff generally believes that the arrangement should be recognized and measured according to its nature and reflected as a reduction of the proceeds allocated to the newly-issued securities. FN 2, 3

The SEC staff believes that an escrowed share arrangement in which the shares are automatically forfeited if employment terminates is compensation, consistent with the principle articulated in paragraph 805-10-55-25(a).

FN 1 Under these arrangements, which can be between shareholders and a company or directly between the shareholders and new investors, shareholders agree to place a portion of their shares in escrow in connection with an initial public offering or other capital-raising transaction. Shares placed in escrow are released back to the shareholders only if specified performance-related criteria are met.

FN 2 The SEC staff notes that discounts on debt instruments are amortized using the effective interest method as discussed in Section 835-30-35, while discounts on common equity are not generally amortized.

FN 3 Consistent with the views in paragraph 225-10-S99-4, SAB Topic 5.T., Accounting for Expenses or Liabilities Paid by Principal Stockholder(s), and paragraph 225-10-S99-3, SAB Topic 1.B., Allocation of Expenses and Related Disclosure in Financial Statements of Subsidiaries, Divisions or Lesser Business Components of Another Entity, the SEC staff believes that the benefit created by the shareholder's escrow arrangement should be reflected in the company's financial statements even when the company is not party to the arrangement.

718 Compensation—Stock Compensation
20 Awards Classified as Equity

718-20-00 Status

General Note: The Status Section identifies changes to this Subtopic resulting from Accounting Standards Updates. The Section provides references to the affected Codification content and links to the related Accounting Standards Updates. Nonsubstantive changes for items such as editorial, link and similar corrections are included separately in Maintenance Updates.

General

718-20-00-1 The following table identifies the changes made to this Subtopic.

Excess Tax Benefits	Superseded	Accounting Standards Update No. 2016-09	03/30/2016
718-20-35-3A	Added	Accounting Standards Update No. 2016-09	03/30/2016
718-20-55-4 through 55-7	Amended	Accounting Standards Update No. 2016-09	03/30/2016
718-20-55-10	Amended	Accounting Standards Update No. 2016-09	03/30/2016
718-20-55-12	Amended	Accounting Standards Update No. 2016-09	03/30/2016
718-20-55-20	Amended	Accounting Standards Update No. 2016-09	03/30/2016
718-20-55-21	Amended	Accounting Standards Update No. 2016-09	03/30/2016
718-20-55-22	Superseded	Accounting Standards Update No. 2016-09	03/30/2016
718-20-55-23	Amended	Accounting Standards Update No. 2016-09	03/30/2016
718-20-55-23A	Added	Accounting Standards Update No. 2016-09	03/30/2016
718-20-55-24	Superseded	Accounting Standards Update No. 2016-09	03/30/2016
718-20-55-34A through 55-34G	Added	Accounting Standards Update No. 2016-09	03/30/2016
718-20-55-60	Amended	Accounting Standards Update No. 2016-09	03/30/2016
718-20-55-74	Amended	Accounting Standards Update No. 2016-09	03/30/2016
718-20-55-75	Amended	Accounting Standards Update No. 2016-09	03/30/2016
718-20-55-87	Amended	Accounting Standards Update No. 2016-09	03/30/2016
718-20-55-121	Amended	Accounting Standards Update No. 2016-09	03/30/2016
718-20-55-123	Amended	Accounting Standards Update No. 2016-09	03/30/2016
718-20-55-132	Amended	Accounting Standards Update No. 2016-09	03/30/2016
718-20-55-133	Amended	Accounting Standards Update No. 2016-09	03/30/2016
718-20-55-144	Amended	Accounting Standards Update No. 2016-09	03/30/2016

718-20-05 Overview and Background

General Note: The Overview and Background Section provides overview and background material for the guidance contained in the Subtopic. It does not provide the historical background or due process. It may contain certain material that users generally consider useful to understand the typical situations addressed by the standards. The Section does not summarize the accounting and reporting requirements.

General

718-20-05-1 Share-based payment awards to **employees** may be classified as either equity or liabilities. This Subtopic deals with instruments classified as equity. It is interrelated with Subtopic 718-10, which contains guidance applicable to instruments classified as either equity or liabilities issued in **share-based payment transactions**. It may also be necessary in some cases to refer to the guidance contained in Subtopic 718-30.

718-20-15 Scope and Scope Exceptions

General Note: The Scope and Scope Exceptions Section outlines the items (for example, the entities, transactions, instruments, or events) to which the guidance in the Subtopic does or does not apply. In some cases, the Section may contain definitional or other text to frame the scope.

General

> Overall Guidance

718-20-15-1 This Subtopic follows the same Scope and Scope Exceptions as outlined in the Overall Subtopic, see Section 718-10-15, with specific transaction qualifications noted below.

> Transactions

718-20-15-2 The guidance in this Subtopic applies to share-based payment awards to employees that are classified as equity (see paragraphs 718-10-25-6 through 25-19 for a description of what is classified as equity).

718-20-15-3 The guidance in this Subtopic does not apply to equity instruments held by an employee stock ownership plan.

718-20-20 Glossary

General Note: The Master Glossary contains all terms identified as glossary terms throughout the Codification. Clicking on any term in the Master Glossary will display where the term is used. The Master Glossary may contain identical terms with different definitions, some of which may not be appropriate for a particular Subtopic. For any particular Subtopic, users should only use the glossary terms included in the particular Subtopic Glossary Section (Section 20).

Award

The collective noun for multiple instruments with the same terms and conditions granted at the same time either to a single employee or to a group of employees. An award may specify multiple vesting dates, referred to as graded vesting, and different parts of an award may have different expected terms. References to an award also apply to a portion of an award.

Calculated Value

A measure of the value of a share option or similar instrument determined by substituting the historical volatility of an appropriate industry sector index for the expected volatility of a nonpublic entity's share price in an option-pricing model.

Closed-Form Model

A valuation model that uses an equation to produce an estimated fair value. The Black-Scholes-Merton formula is a closed-form model. In the context of option valuation, both closed-form models and lattice models are based on risk-neutral valuation and a contingent claims framework. The payoff of a contingent claim, and thus its value, depends on the value(s) of one or more other assets. The contingent claims framework is a valuation methodology that explicitly recognizes that dependency and values the contingent claim as a function of the value of the underlying asset(s). One application of that methodology is risk-neutral valuation in which the contingent claim can be replicated by a combination of the underlying asset and a risk-free bond. If that replication is possible, the value of the contingent claim can be determined without estimating the expected returns on the underlying asset. The Black-Scholes-Merton formula is a special case of that replication.

Cross-Volatility

A measure of the relationship between the volatilities of the prices of two assets taking into account the correlation between movements in the prices of the assets. See Volatility.

Derived Service Period

A service period for an award with a market condition that is inferred from the application of certain valuation techniques used to estimate fair value. For example, the derived service period for an award of share options that the employee can exercise only if the share price increases by 25 percent at any time during a 5-year period can be inferred from certain valuation techniques. In a lattice model, that derived service period represents the duration of the median of the distribution of share price paths on which the market condition is satisfied. That median is the middle share price path (the midpoint of the distribution of paths) on which the market condition is satisfied. The duration is the period of time from the service inception date to the expected date of satisfaction (as inferred from the valuation technique). If the derived service period is three years, the estimated requisite service period is three years and all compensation cost would be recognized over that period, unless the market condition was satisfied at an earlier date. Compensation cost would not be recognized beyond three years even if after the grant date the entity determines that it is not probable that the market condition will be satisfied within that period. Further, an award of fully vested, deep out-of-the-money share options has a derived service period that must be determined from the valuation techniques used to estimate fair value. See Explicit Service Period, Implicit Service Period, and Requisite Service Period.

Employee

An individual over whom the grantor of a share-based compensation award exercises or has the right to exercise sufficient control to establish an employer-employee relationship based on common law as illustrated in case law and currently under U.S. Internal Revenue Service (IRS) Revenue Ruling 87-41. A reporting entity based in a foreign jurisdiction would determine whether an employee-employer relationship exists based on the pertinent laws of that jurisdiction. Accordingly, a grantee meets the definition of an employee if the grantor consistently represents that individual to be an employee under common law. The definition of an employee for payroll tax purposes under the U.S. Internal Revenue Code includes common law employees. Accordingly, a grantor that classifies a grantee potentially subject to U.S. payroll taxes as an employee also must represent that individual as an employee for payroll tax purposes (unless the grantee is a leased employee as described below). A grantee does not meet the definition of an employee solely because the grantor represents that individual as an employee for some, but not all, purposes. For example, a requirement or decision to classify a grantee as an employee for U.S. payroll tax purposes does not, by itself, indicate that the grantee is an employee because the grantee also must be an employee of the grantor under common law.

A leased individual is deemed to be an employee of the lessee if all of the following requirements are met:

a. The leased individual qualifies as a common law employee of the lessee, and the lessor is contractually required to remit payroll taxes on the compensation paid to the leased individual for the services provided to the lessee.

b. The lessor and lessee agree in writing to all of the following conditions related to the leased individual:

1. The lessee has the exclusive right to grant stock compensation to the individual for the employee service to the lessee.

2. The lessee has a right to hire, fire, and control the activities of the individual. (The lessor also may have that right.)

3. The lessee has the exclusive right to determine the economic value of the services performed by the individual (including wages and the number of units and value of stock compensation granted).

4. The individual has the ability to participate in the lessee's employee benefit plans, if any, on the same basis as other comparable employees of the lessee.

5. The lessee agrees to and remits to the lessor funds sufficient to cover the complete compensation, including all payroll taxes, of the individual on or before a contractually agreed upon date or dates.

A nonemployee director does not satisfy this definition of employee. Nevertheless, nonemployee directors acting in their role as members of a board of directors are treated as employees if those directors were elected by the employer's shareholders or appointed to a board position that will be filled by shareholder election when the existing term expires. However, that requirement applies only to awards granted to nonemployee directors for their services as directors. Awards granted to those individuals for other services shall be accounted for as awards to nonemployees.

Equity Restructuring

A nonreciprocal transaction between an entity and its shareholders that causes the per-share fair value of the shares underlying an option or similar award to change, such as a stock dividend, stock split, spinoff, rights offering, or recapitalization through a large, nonrecurring cash dividend.

Excess Tax Benefits

The realized tax benefit related to the amount (caused by changes in the fair value of the entity's shares after the measurement date for financial reporting) of deductible compensation cost reported on an employer's tax return for equity instruments in excess of the compensation cost for those instruments recognized for financial reporting purposes.

Note: The following definition is Pending Content; see Transition Guidance in 718-10-65-4.

[Glossary term superseded by Accounting Standards Update No. 2016-09]

Explicit Service Period

A service period that is explicitly stated in the terms of a share-based payment award. For example, an award stating that it vests after three years of continuous employee service from a given date (usually the grant date) has an explicit service period of three years. See Derived Service Period, Implicit Service Period, and Requisite Service Period.

Fair Value

The amount at which an asset (or liability) could be bought (or incurred) or sold (or settled) in a current transaction between willing parties, that is, other than in a forced or liquidation sale.

Grant Date

The date at which an employer and an employee reach a mutual understanding of the key terms and conditions of a share-based payment award. The employer becomes contingently obligated on the grant date to issue equity instruments or transfer assets to an employee who renders the requisite service. Awards made under an arrangement that is subject to shareholder approval are not deemed to be granted until that approval is obtained unless approval is essentially a formality (or perfunctory), for example, if management and the members of the board of directors control enough votes to approve the arrangement. Similarly, individual awards that are subject to approval by the board of directors, management, or both are not deemed to be granted until all such approvals are obtained. The grant date for an award of equity instruments is the date that an employee begins to benefit from, or be adversely affected by, subsequent changes in the price of the employer's equity shares. Paragraph 718-10-25-5 provides guidance on determining the grant date. See Service Inception Date.

Implicit Service Period

A service period that is not explicitly stated in the terms of a share-based payment award but that may be inferred from an analysis of those terms and other facts and circumstances. For instance, if an award of share options vests upon the completion of a new product design and it is probable that the design will be completed in 18 months, the implicit service period is 18 months. See Derived Service Period, Explicit Service Period, and Requisite Service Period.

Intrinsic Value

The amount by which the fair value of the underlying stock exceeds the exercise price of an option. For example, an option with an exercise price of $20 on a stock whose current market price is $25 has an intrinsic value of $5. (A nonvested share may be described as an option on that share with an exercise price of zero. Thus, the fair value of a share is the same as the intrinsic value of such an option on that share.)

Lattice Model

A model that produces an estimated fair value based on the assumed changes in prices of a financial instrument over successive periods of time. The binomial model is an example of a lattice model. In each time period, the model assumes that at least two price movements are possible. The lattice represents the evolution of the value of either a financial instrument or a market variable for the purpose of valuing a financial instrument. In this context, a lattice model is based on risk-neutral valuation and a contingent claims framework. See Closed-Form Model for an explanation of the terms risk-neutral valuation and contingent claims framework.

Market Condition

A condition affecting the exercise price, exercisability, or other pertinent factors used in determining the fair value of an award under a share-based payment arrangement that relates to the achievement of either of the following:

a. A specified price of the issuer's shares or a specified amount of intrinsic value indexed solely to the issuer's shares

b. A specified price of the issuer's shares in terms of a similar (or index of similar) equity security (securities). The term similar as used in this definition refers to an equity security of another entity that has the same type of residual rights. For example, common stock of one entity generally would be similar to the common stock of another entity for this purpose.

Modification

A change in any of the terms or conditions of a share-based payment award.

Nonpublic Entity
Any entity other than one that meets any of the following criteria:

a. Has equity securities that trade in a public market either on a stock exchange (domestic or foreign) or in an over-the-counter market, including securities quoted only locally or regionally

b. Makes a filing with a regulatory agency in preparation for the sale of any class of equity securities in a public market

c. Is controlled by an entity covered by the preceding criteria.

An entity that has only debt securities trading in a public market (or that has made a filing with a regulatory agency in preparation to trade only debt securities) is a nonpublic entity.

Nonvested Shares
Shares that an entity has not yet issued because the agreed-upon consideration, such as employee services, has not yet been received. Nonvested shares cannot be sold. The restriction on sale of nonvested shares is due to the forfeitability of the shares if specified events occur (or do not occur).

Performance Condition
A condition affecting the vesting, exercisability, exercise price, or other pertinent factors used in determining the fair value of an award that relates to both of the following:

a. An employee's rendering service for a specified (either explicitly or implicitly) period of time

b. Achieving a specified performance target that is defined solely by reference to the employer's own operations (or activities).

Attaining a specified growth rate in return on assets, obtaining regulatory approval to market a specified product, selling shares in an initial public offering or other financing event, and a change in control are examples of performance conditions. A performance target also may be defined by reference to the same performance measure of another entity or group of entities. For example, attaining a growth rate in earnings per share (EPS) that exceeds the average growth rate in EPS of other entities in the same industry is a performance condition. A performance target might pertain either to the performance of the entity as a whole or to some part of the entity, such as a division or an individual employee.

Probable
The future event or events are likely to occur.

Public Entity
An entity that meets any of the following criteria:

a. Has equity securities that trade in a public market, either on a stock exchange (domestic or foreign) or in an over-the-counter market, including securities quoted only locally or regionally

b. Makes a filing with a regulatory agency in preparation for the sale of any class of equity securities in a public market

c. Is controlled by an entity covered by the preceding criteria. That is, a subsidiary of a public entity is itself a public entity.

An entity that has only debt securities trading in a public market (or that has made a filing with a regulatory agency in preparation to trade only debt securities) is not a public entity.

Replacement Award
An award of share-based compensation that is granted (or offered to grant) concurrently with the cancellation of another award.

Requisite Service Period
The period or periods during which an employee is required to provide service in exchange for an award under a share-based payment arrangement. The service that an employee is required to render during that period is referred to as the requisite service. The requisite service period for an award that has only a service condition is presumed to be the vesting period, unless there is clear evidence to the contrary. If an award requires future service for vesting, the entity cannot define a prior period as the requisite service period. Requisite service periods may be explicit, implicit, or derived, depending on the terms of the share-based payment award.

Restricted Share
A share for which sale is contractually or governmentally prohibited for a specified period of time. Most grants of shares to employees are better termed nonvested shares because the limitation on sale stems solely from the forfeitability of the shares before employees have satisfied the necessary service or performance condition(s) to earn the rights to the shares. Restricted shares issued for consideration other than employee services, on the other hand, are fully paid for immediately. For those shares, there is no period analogous to a requisite service period during which the issuer is unilaterally obligated to issue shares when the purchaser pays for those shares, but the purchaser is not obligated to buy the shares. The term restricted shares refers only to fully vested and outstanding shares whose sale is contractually or governmentally prohibited for a specified period of time. Vested equity instruments that are transferable to an employee's immediate family members or to a trust that benefits only those family members are restricted if the transferred instruments retain the same prohibition on sale to third parties. See Nonvested Shares.

Restriction
A contractual or governmental provision that prohibits sale (or substantive sale by using derivatives or other means to effectively terminate the risk of future changes in the share price) of an equity instrument for a specified period of time.

Service Condition
A condition affecting the vesting, exercisability, exercise price, or other pertinent factors used in determining the fair value of an award that depends solely on an employee rendering service to the employer for the requisite service period. A condition that results in the acceleration of vesting in the event of an employee's death, disability, or termination without cause is a service condition.

Service Inception Date
The date at which the requisite service period begins. The service inception date usually is the grant date, but the service inception date may differ from the grant date (see Example 6 [see paragraph 718-10-55-107]).

Settlement of an Award
An action or event that irrevocably extinguishes the issuing entity's obligation under a share-based payment award. Transactions and events that constitute settlements include the following:

a. Exercise of a share option or lapse of an option at the end of its contractual term

b. Vesting of shares

c. Forfeiture of shares or share options due to failure to satisfy a vesting condition

d. An entity's repurchase of instruments in exchange for assets or for fully vested and transferable equity instruments.

The vesting of a share option is not a settlement because the entity remains obligated to issue shares upon exercise of the option.

Share Option
A contract that gives the holder the right, but not the obligation, either to purchase (to call) or to sell (to put) a certain number of shares at a predetermined price for a specified period of time. Most share options granted to employees under share-based compensation arrangements are call options, but some may be put options.

Share Unit
A contract under which the holder has the right to convert each unit into a specified number of shares of the issuing entity.

Share-Based Payment Arrangements
An arrangement under which either of the following conditions is met:

a. One or more suppliers of goods or services (including employees) receive awards of equity shares, equity share options, or other equity instruments.

b. The entity incurs liabilities to suppliers that meet either of the following conditions:

   1. The amounts are based, at least in part, on the price of the entity's shares or other equity instruments. (The phrase at least in part is used because an award may be indexed to both the price of the entity's shares and something other than either the price of the entity's shares or a market, performance, or service condition.)

   2. The awards require or may require settlement by issuance of the entity's shares.

The term shares includes various forms of ownership interest that may not take the legal form of securities (for example, partnership interests), as well as other interests, including those that are liabilities in substance but not in form. Equity shares refers only to shares that are accounted for as equity.

Also called share-based compensation arrangements.

Share-Based Payment Transactions
A transaction under a share-based payment arrangement, including a transaction in which an entity acquires goods or services because related parties or other holders of economic interests in that entity awards a share-based payment to an employee or other supplier of goods or services for the entity's benefit. Also called share-based compensation transactions.

Short-Term Inducement
An offer by the entity that would result in modification of an award to which an award holder may subscribe for a limited period of time.

Vest
To earn the rights to. A share-based payment award becomes vested at the date that the employee's right to receive or retain shares, other instruments, or cash under the award is no longer contingent on satisfaction of either a service condition or a performance condition. Market conditions are not vesting conditions.

The stated vesting provisions of an award often establish the requisite service period, and an award that has reached the end of the requisite service period is vested. However, as indicated in the definition of requisite service period, the stated vesting period may differ from the requisite service period in certain circumstances. Thus, the more precise (but cumbersome) terms would be options, shares, or awards for which the requisite service has been rendered and end of the requisite service period.

Volatility
A measure of the amount by which a financial variable such as a share price has fluctuated (historical volatility) or is expected to fluctuate (expected volatility) during a period. Volatility also may be defined as a probability-weighted measure of the dispersion of returns about the mean. The volatility of a share price is the standard deviation of the continuously compounded rates of return on the share over a specified period. That is the same as the standard deviation of the differences in the natural logarithms of the stock prices plus dividends, if any, over the period. The higher the volatility, the more the returns on the shares can be expected to vary—up or down. Volatility is typically expressed in annualized terms.

718-20-35 Subsequent Measurement

General Note: The Subsequent Measurement Section provides guidance on an entity's subsequent measurement and subsequent recognition of an item. Situations that may result in subsequent changes to carrying amount include impairment, credit losses, fair value adjustments, depreciation and amortization, and so forth.

General

> Fair Value Not Reasonably Estimable

718-20-35-1 An equity instrument for which it is not possible to reasonably estimate **fair value** at the **grant date** shall be remeasured at each reporting date through the date of exercise or other **settlement**. The final measure of compensation cost shall be the **intrinsic value** of the instrument at the date it is settled. Compensation cost for each period until settlement shall be based on the change (or a portion of the change, depending on the percentage of the requisite service that has been rendered at the reporting date) in the intrinsic value of the instrument in each reporting period. The entity shall continue to use the intrinsic value method for those instruments even if it subsequently concludes that it is possible to reasonably estimate their fair value.

> Contingent Features

718-20-35-2 A contingent feature of an **award** that might cause an **employee** to return to the entity either equity instruments earned or realized gains from the sale of equity instruments earned for consideration that is less than fair value on the date of transfer (including no consideration), such as a clawback feature (see paragraph 718-10-55-8), shall be accounted for if and when the contingent event occurs. Example 10 (see paragraph 718-20-55-84) provides an illustration of an award with a clawback feature.

> Modification of an Award

718-20-35-3 A **modification** of the terms or conditions of an equity award shall be treated as an exchange of the original award for a new award. In substance, the entity repurchases the original instrument by issuing a new instrument of equal or greater value, incurring additional compensation cost for any incremental value. The effects of a modification shall be measured as follows:

a. Incremental compensation cost shall be measured as the excess, if any, of the fair value of the modified award determined in accordance with the provisions of this Topic over the fair value of the original award immediately before its terms are modified, measured based on the share price and other pertinent factors at that date. As indicated in paragraph 718-10-30-20, references to fair value throughout this Topic shall be read also to encompass **calculated value**. The effect of the modification on the number of instruments expected to **vest** also shall be reflected in determining incremental compensation cost. The estimate at the modification date of the portion of the award expected to vest shall be subsequently adjusted, if necessary, in accordance with paragraph 718-10-35-3 and other guidance in Examples 14 through 15 (see paragraphs 718-20-55-107 through 55-121).

b. Total recognized compensation cost for an equity award shall at least equal the fair value of the award at the grant date unless at the date of the modification the performance or service conditions of the original award are not expected to be satisfied. Thus, the total compensation cost measured at the date of a modification shall be the sum of the following:

1. The portion of the grant-date fair value of the original award for which the requisite service is expected to be rendered (or has already been rendered) at that date

2. The incremental cost resulting from the modification.

Compensation cost shall be subsequently adjusted, if necessary, in accordance with paragraph 718-10-35-3 and other guidance in Examples 14 through 15 (see paragraph 718-20-55-107 through 55-121).

c. A change in compensation cost for an equity award measured at intrinsic value in accordance with paragraph 718-20-35-1 shall be measured by comparing the intrinsic value of the modified award, if any, with the intrinsic value of the original award, if any, immediately before the modification.

718-20-35-3A

Pending Content:

Transition Date: *(P) December 16, 2016; (N) December 16, 2017* | **Transition Guidance: 718-10-65-6**

An entity that has an accounting policy to account for forfeitures when they occur in accordance with paragraph 718-10-35-3 shall assess at the date of the modification whether the performance or service conditions of the original award are expected to be satisfied when measuring the effects of the modification in accordance with paragraph 718-20-35-3. However, the entity shall apply its accounting policy to account for forfeitures when they occur when subsequently accounting for the modified award.

718-20-35-4 Examples 12 through 16 (see paragraphs 718-20-55-93 through 55-144) provide additional guidance on, and illustrate the accounting for, modifications of both vested and nonvested awards, including a modification that changes the classification of the related financial instruments from equity to liability or vice versa, and modifications of vesting conditions. Paragraphs 718-10-35-9 through 35-14 provide additional guidance on accounting for modifications of certain freestanding financial instruments that initially were subject to this Topic but subsequently became subject to other applicable generally accepted accounting principles (GAAP).

> > Short-Term Inducements

718-20-35-5 A **short-term inducement** shall be accounted for as a modification of the terms of only the awards of employees who accept the inducement. Other inducements are modifications of the terms of all awards subject to them and shall be accounted for as such.

> > Equity Restructuring or Business Combination

718-20-35-6 Exchanges of share options or other equity instruments or changes to their terms in conjunction with an **equity restructuring** or a business combination are modifications for purposes of this Subtopic. Except for a modification to add an antidilution provision that is not made in contemplation of an equity restructuring, accounting for a modification in conjunction with an equity restructuring requires a comparison of the fair value of the modified award with the fair value of the original award immediately before the modification in accordance with paragraph 718-20-35-3. If those amounts are the same, for instance, because the modification is designed to equalize the fair value of an award before and after an equity restructuring, no incremental compensation cost is recognized. Example 13 (see paragraph 718-20-55-103) provides further guidance on applying the provisions of this paragraph. See paragraph 718-10-35-10 for an additional exception.

> > Repurchase or Cancellation

718-20-35-7 The amount of cash or other assets transferred (or liabilities incurred) to repurchase an equity award shall be charged to equity, to the extent that the amount paid does not exceed the fair value of the equity instruments repurchased at the repurchase date. Any excess of the repurchase price over the fair value of the instruments repurchased shall be recognized as additional compensation cost. An entity that repurchases an award for which the requisite service has not been rendered has, in effect, modified the requisite service period to the period for which service already has been rendered, and thus the amount of compensation cost measured at the grant date but not yet recognized shall be recognized at the repurchase date.

> > Cancellation and Replacement

718-20-35-8 Cancellation of an award accompanied by the concurrent grant of (or offer to grant) a **replacement award** or other valuable consideration shall be accounted for as a modification of the terms of the cancelled award. (The phrase *offer to grant* is intended to cover situations in which the **service inception date** precedes the grant date.) Therefore, incremental compensation cost shall be measured as the excess of the fair value of the replacement award or other valuable consideration over the fair value of the cancelled award at the cancellation date in accordance with paragraph 718-20-35-3. Thus, the total compensation cost measured at the date of a cancellation and replacement shall be the portion of the grant-date fair value of the original award for which the requisite service is expected to be rendered (or has already been rendered) at that date plus the incremental cost resulting from the cancellation and replacement.

718-20-35-9 A cancellation of an award that is not accompanied by the concurrent grant of (or offer to grant) a replacement award or other valuable consideration shall be accounted for as a repurchase for no consideration. Accordingly, any previously unrecognized compensation cost shall be recognized at the cancellation date.

718-20-55 Implementation Guidance and Illustrations

General Note: The Implementation Guidance and Illustrations Section contains implementation guidance and illustrations that are an integral part of the Subtopic. The implementation guidance and illustrations do not address all possible variations. Users must consider carefully the actual facts and circumstances in relation to the requirements of the Subtopic.

General

718-20-55-1 This Section may contain summaries or references to specific tax code or other regulations that existed at the time that the standard was issued. The Financial Accounting Standards Board (FASB) does not monitor such code or regulations and assumes no responsibility for the current accuracy of the summaries or references. Users must evaluate such code or regulations to determine consistency of the current code or regulation with that presented.

> Implementation Guidance

> > Equity Restructuring

718-20-55-2 In accordance with paragraph 718-20-35-6, accounting for a **modification** in conjunction with an **equity restructuring** requires a comparison of the **fair value** of the modified **award** with the fair value of the original award immediately before the modification, except as follows. If an award is modified to add an antidilution provision (that is, a provision designed to equalize an award's value before and after an equity restructuring) and that modification is not made in contemplation of an equity restructuring, a comparison of the fair value of the modified award and the fair value of the original award immediately before the modification is not required. Example 13 (see paragraph 718-20-55-103) provides additional guidance on accounting for modifications of awards in the context of equity restructurings.

> Illustrations

718-20-55-3 The following Examples are included in this Subtopic because they assume equity classification. However, these Examples would also apply to awards classified as liabilities except that the amounts in the Examples would likely change due to the requirement under Subtopic 718-30 to remeasure share-based liability awards at fair value each reporting period until **settlement**.

> > Example 1: Accounting for Share Options with Service Conditions

718-20-55-4 The following Cases illustrate the guidance in paragraphs 718-10-35-2 through 35-7 and 718-740-25-2 through 25-3, except for the vesting provisions:

a. Share options with cliff vesting (Case A)

b. Share options with graded vesting (Case B).

Pending Content:

Transition Date: *(P) December 16, 2016; (N) December 16, 2017* | **Transition Guidance: 718-10-65-6**

The following Cases illustrate the guidance in paragraphs 718-10-35-2 through 35-7 and 718-740-25-2 through 25-3, except for the vesting provisions:

a. Share options with cliff vesting and forfeitures estimated in initial accruals of compensation cost (Case A)

b. Share options with graded vesting and forfeitures estimated in initial accruals of compensation cost (Case B)

c. Share options with cliff vesting and forfeitures recognized when they occur (Case C).

718-20-55-5 Cases A and B share all of the following assumptions.

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Cases A, B, and C share all of the assumptions in paragraphs 718-20-55-6 through 55-34G, with the following exceptions:

a. In Case C, Entity T has an accounting policy to account for forfeitures when they occur in accordance with paragraph 718-10-35-3.

b. In Cases A and B, Entity T has an accounting policy to estimate the number of forfeitures expected to occur, also in accordance with paragraph 718-10-35-3.

c. In Case B, the share options have graded vesting.

d. In Cases A and C, the share options have cliff vesting.

718-20-55-6 Entity T, a **public entity**, grants at-the-money **employee** share options with a contractual term of 10 years. All share options **vest** at the end of three years (cliff vesting), which is an explicit service (and requisite service) period of three years. The share options do not qualify as incentive stock options for U.S. tax purposes. The enacted tax rate is 35 percent.

Pending Content:

Transition Date: *(P) December 16, 2016; (N) December 16, 2017* | **Transition Guidance: 718-10-65-4**

Entity T, a **public entity**, grants at-the-money **employee** share options with a contractual term of 10 years. All share options **vest** at the end of three years (cliff vesting), which is an explicit service (and requisite service) period of three years. The share options do not qualify as incentive stock options for U.S. tax purposes. The enacted tax rate is 35 percent. In each Case, Entity T concludes that it will have sufficient future taxable income to realize the deferred tax benefits from its share-based payment transactions.

718-20-55-7 The following table shows assumptions and information about the share options granted on January 1, 20X5 applicable to both Cases.

Share options granted		900,000
Employees granted options		3,000
Expected forfeitures per year		3.0%
Share price at the grant date	$	30
Exercise price	$	30
Contractual term of options		10 years
Risk-free interest rate over contractual term		1.5 to 4.3%
Expected volatility over contractual term		40 to 60%
Expected dividend yield over contractual term		1.0%
Suboptimal exercise factor		2

Pending Content:

Transition Date: *(P) December 16, 2016; (N) December 16, 2017* | **Transition Guidance:** **718-10-65-6**

The following table shows assumptions and information about the share options granted on January 1, 20X5 applicable to all Cases, except for expected forfeitures per year, which does not apply in Case C.

Share options granted		900,000
Employees granted options		3,000
Expected forfeitures per year		3.0%
Share price at the grant date	$	30
Exercise price	$	30
Contractual term of options		10 years
Risk-free interest rate over contractual term		1.5 to 4.3%
Expected volatility over contractual term		40 to 60%
Expected dividend yield over contractual term		1.0%
Suboptimal exercise factor		2

718-20-55-8 A suboptimal exercise factor of two means that exercise is generally expected to occur when the share price reaches two times the **share option**'s exercise price. Option-pricing theory generally holds that the optimal (or profit-maximizing) time to exercise an option is at the end of the option's term; therefore, if an option is exercised before the end of its term, that exercise is referred to as suboptimal. Suboptimal exercise also is referred to as early exercise. Suboptimal or early exercise affects the expected term of an option. Early exercise can be incorporated into option-pricing models through various means. In this Case, Entity T has sufficient information to reasonably estimate early exercise and has incorporated it as a function of Entity T's future stock price changes (or the option's **intrinsic value**). In this Case, the factor of 2 indicates that early exercise would be expected to occur, on average, if the stock price reaches $60 per share ($30 × 2). Rather than use its weighted average suboptimal exercise factor, Entity T also may use multiple factors based on a distribution of early exercise data in relation to its stock price.

718-20-55-9 This Case assumes that each employee receives an equal grant of 300 options. Using as inputs the last 7 items from the table in paragraph 718-20-55-7, Entity T's lattice-based valuation model produces a fair value of $14.69 per option. A **lattice model** uses a suboptimal exercise factor to calculate the expected term (that is, the expected term is an output) rather than the expected term being a separate input. If an entity uses a Black-Scholes-Merton option-pricing formula, the expected term would be used as an input instead of a suboptimal exercise factor.

> > > Case A: Share Options with Cliff Vesting

718-20-55-10 Total compensation cost recognized over the **requisite service period** (which is the vesting period in this Case) shall be the grant-date fair value of all share options that actually vest (that is, all options for which the requisite service is rendered). Paragraph 718-10-35-3 requires an entity to estimate at the **grant date** the number of share options for which the requisite service is expected to be rendered (which, in this Case, is the number of share options for which vesting is deemed **probable**). If that estimate changes, it shall be accounted for as a change in estimate and its cumulative effect (from applying the change retrospectively) recognized in the period of change. Entity T estimates at the grant date the number of share options expected to vest and subsequently adjusts compensation cost for changes in the estimated rate of forfeitures and differences between expectations and actual experience. This Case assumes that none of the compensation cost is capitalized as part of the cost of an asset.

Pending Content:

Transition Date: *(P) December 16, 2016; (N) December 16, 2017* | **Transition Guidance:** **718-10-65-6**

Editor's Note*: The content of 718-20-55-10 will change upon transition, together with a change in the heading noted below.*

> > > **Case A: Share Options with Cliff Vesting and Forfeitures Estimated in Initial Accruals of Compensation Cost**

Total compensation cost recognized over the **requisite service period** (which is the vesting period in this Case) shall be the grant-date fair value of all share options that actually vest (that is, all options for which the requisite service is rendered). This Case assumes that Entity T's accounting policy is to estimate the number of forfeitures expected to occur in accordance with paragraph 718-10-35-3. As a result, Entity T is required to estimate at the **grant date** the number of share options for which the requisite service is expected to be rendered (which, in this Case, is the number of share options for which vesting is deemed **probable**). If that estimate changes, it shall be accounted for as a change in estimate and its cumulative effect (from applying the change retrospectively) recognized in the period of change. Entity T estimates at the grant date the number of share options expected to vest and subsequently adjusts compensation cost for changes in the estimated rate of forfeitures and differences between expectations and actual experience. This Case also assumes that none of the compensation cost is capitalized as part of the cost of an asset.

718-20-55-11 The estimate of the number of forfeitures considers historical employee turnover rates and expectations about the future. Entity T has experienced historical turnover rates of approximately 3 percent per year for employees at the grantees' level, and it expects that rate to continue over the requisite service period of the awards. Therefore, at the grant date Entity T estimates the total compensation cost to be recognized over the requisite service period based on an expected forfeiture rate of 3 percent per year. Actual forfeitures are 5 percent in 20X5, but no adjustments to cumulative compensation cost are recognized in 20X5 because Entity T still expects actual forfeitures to average 3 percent per year over the 3-year vesting period. As of December 31, 20X6, management decides that the forfeiture rate will likely increase through 20X7 and changes its estimated forfeiture rate for the entire award to 6 percent per year. Adjustments to cumulative compensation cost to reflect the higher forfeiture rate are made at the end of 20X6. At the end of 20X7 when the award becomes vested, actual forfeitures have averaged 6 percent per year, and no further adjustment is necessary.

718-20-55-12 The first set of calculations illustrates the accounting for the award of share options on January 1, 20X5, assuming that the share options granted vest at the end of three years. (Case B illustrates the accounting for an award assuming graded vesting in which a specified portion of the share options granted vest at the end of each year.) The number of share options expected to vest is estimated at the grant date to be 821,406 (900,000 $\times .97^{3}$). Thus, the compensation cost to be recognized over the requisite service period at January 1, 20X5, is $12,066,454 (821,406 × $14.69), and the compensation cost to be recognized during each year of the 3-year vesting period is $4,022,151 ($12,066,454 ÷ 3). In this Case, Entity T has concluded that it will have sufficient future taxable income to realize the deferred tax benefits from its **share-based payment transactions**. The journal entries to recognize compensation cost and related deferred tax benefit at the enacted tax rate of 35 percent are as follows for 20X5.

Compensation cost	$ 4,022,151	
Additional paid-in capital		$ 4,022,151

To recognize compensation cost.

Deferred tax asset	$ 1,407,753	
Deferred tax benefit		$ 1,407,753

To recognize the deferred tax asset for the temporary difference related to compensation cost ($4,022,151 ×.35 = $1,407,753).

Pending Content:

Transition Date: *(P) December 16, 2016; (N) December 16, 2017* │ **Transition Guidance:** **718-10-65-4**

The first set of calculations illustrates the accounting for the award of share options on January 1, 20X5, assuming that the share options granted vest at the end of three years. (Case B illustrates the accounting for an award assuming graded vesting in which a specified portion of the share options granted vest at the end of each year.) The number of share options expected to vest is estimated at the grant date to be 821,406 (900,000 $\times .97^3$). Thus, the compensation cost to be recognized over the requisite service period at January 1, 20X5, is $12,066,454 (821,406 × $14.69), and the compensation cost to be recognized during each year of the 3-year vesting period is $4,022,151 ($12,066,454 ÷ 3). The journal entries to recognize compensation cost and related deferred tax benefit at the enacted tax rate of 35 percent are as follows for 20X5.

Compensation cost	$ 4,022,151	
Additional paid-in capital		$ 4,022,151

To recognize compensation cost.

Deferred tax asset	$ 1,407,753	
Deferred tax benefit		$ 1,407,753

To recognize the deferred tax asset for the temporary difference related to compensation cost ($4,022,151 ×.35 = $1,407,753).

718-20-55-13 The net after-tax effect on income of recognizing compensation cost for 20X5 is $2,614,398 ($4,022,151 – $1,407,753).

718-20-55-14 Absent a change in estimated forfeitures, the same journal entries would be made to recognize compensation cost and related tax effects for 20X6 and 20X7, resulting in a net after-tax cost for each year of $2,614,398. However, at the end of 20X6, management changes its estimated employee forfeiture rate from 3 percent to 6 percent per year. The revised number of share options expected to vest is 747,526 (900,000 $\times .94^3$). Accordingly, the revised cumulative compensation cost to be recognized by the end of 20X7 is $10,981,157 (747,526 × $14.69). The cumulative adjustment to reflect the effect of adjusting the forfeiture rate is the difference between two-thirds of the revised cost of the award and the cost already recognized for 20X5 and 20X6. The related journal entries and the computations follow.

At December 31, 20X6, to adjust for new forfeiture rate.

Revised total compensation cost	$10,981,157
Revised cumulative cost as of December 31, 20X6 ($10,981,157 × ⅔)	$ 7,320,771
Cost already recognized in 20X5 and 20X6 ($4,022,151 x 2)	8,044,302
Adjustment to cost at December 31, 20X6	$ (723,531)

718-20-55-15 The related journal entries are as follows.

Additional paid-in capital	$723,531	
Compensation cost		$723,531

To adjust previously recognized compensation cost and equity to reflect a higher estimated forfeiture rate.

Deferred tax expense	$253,236	
Deferred tax asset		$253,236

To adjust the deferred tax accounts to reflect the tax effect of increasing the estimated forfeiture rate ($723,531 ×.35 = $253,236).

718-20-55-16 Journal entries for 20X7 are as follows.

Compensation cost	$ 3,660,386	
Additional paid-in capital		$ 3,660,386

To recognize compensation cost ($10,981,157 ÷ 3 = $3,660,386).

Deferred tax asset	$1,281,135	
Deferred tax benefit		$1,281,135

To recognize the deferred tax asset for additional compensation cost ($3,660,386 ×.35 = $1,281,135).

718-20-55-17 As of December 31, 20X7, the entity would examine its actual forfeitures and make any necessary adjustments to reflect cumulative compensation cost for the number of shares that actually vested.

Share Option—Cliff Vesting

Year	Total Value of Award	Pretax Cost for Year	Cumulative Pretax Cost
20X5	$12,066,454 (821,406 × $14.69)	$4,022,151 ($12,066,454 ÷ 3)	$ 4,022,151
20X6	$10,981,157 (747,526 × $14.69)	$3,298,620 [($10,981,157 × 2/3) – $4,022,151]	$ 7,320,771
20X7	$10,981,157 (747,526 × $14.69)	$3,660,386 ($10,981,157 ÷ 3)	$ 10,981,157

718-20-55-18 All 747,526 vested share options are exercised on the last day of 20Y2. Entity T has already recognized its income tax expense for the year without regard to the effects of the exercise of the employee share options. In other words, current tax expense and current taxes payable were recognized based on income and deductions before consideration of additional deductions from exercise of the employee share options. Upon exercise, the amount credited to common stock (or other appropriate equity accounts) is the sum of the cash proceeds received and the amounts previously credited to additional paid-in capital in the periods the services were received (20X5 through 20X7). In this Case, Entity T has no-par common stock and at exercise, the share price is assumed to be $60.

718-20-55-19 At exercise the journal entries are as follows.

Cash (747,526 × $30)	$ 22,425,780	
Additional paid-in capital	$ 10,981,157	
Common stock		$ 33,406,937

To recognize the issuance of common stock upon exercise of share options and to reclassify previously recorded paid-in capital.

718-20-55-20 In this Case, the difference between the market price of the shares and the exercise price on the date of exercise is deductible for tax purposes pursuant to U.S. tax law in effect in 2004 (the share options do not qualify as incentive stock options). Realized benefits of tax return deductions in excess of compensation cost recognized are accounted for as a credit to additional paid-in capital. (See Subtopic 718-740 for additional guidance on tax issues.) As indicated in paragraph 718-740-25-10, a share option exercise may result in a tax deduction before the actual realization of the related tax benefit because the entity, for example, has a net operating loss carryforward. In that situation, a tax benefit and a credit to additional paid-in capital for the excess deduction would not be recognized until that deduction reduces taxes payable. With the share price of $60 at exercise, the deductible amount is $22,425,780 [747,526 × ($60 – $30)]. Entity T has sufficient taxable income to fully realize that deduction, and the tax benefit realized is $7,849,023 ($22,425,780 ×.35).

Pending Content:

Transition Date: *(P) December 16, 2016; (N) December 16, 2017* | **Transition Guidance: 718-10-65-4**

In this Case, the difference between the market price of the shares and the exercise price on the date of exercise is deductible for tax purposes pursuant to U.S. tax law in effect in 2004 (the share options do not qualify as incentive stock options). Paragraph 718-740-35-2 requires that the tax effect be recognized as income tax expense or benefit in the income statement for the difference between the deduction for an award for tax purposes and the cumulative compensation cost of that award recognized for financial reporting purposes. With the share price of $60 at exercise, the deductible amount is $22,425,780 [747,526 × ($60 – $30)], and the tax benefit is $7,849,023 ($22,425,780 ×.35).

718-20-55-21 At exercise the journal entries are as follows.

Deferred tax expense	$ 3,843,405	
Deferred tax asset		$ 3,843,405

To write off the deferred tax asset related to deductible share options at exercise ($10,981,157 ×.35 = $3,843,405).

Current taxes payable	$ 7,849,023	
Current tax expense		$ 3,843,405
Additional paid-in capital		$ 4,005,618

To adjust current tax expense and current taxes payable to recognize the current tax benefit from deductible compensation cost upon exercise of share options.

Pending Content:

Transition Date: *(P) December 16, 2016; (N) December 16, 2017* | **Transition Guidance: 718-10-65-4**

At exercise the journal entries are as follows.

Deferred tax expense	$ 3,843,405	
Deferred tax asset		$ 3,843,405

To write off the deferred tax asset related to deductible share options at exercise ($10,981,157 ×.35 = $3,843,405).

Current taxes payable	$ 7,849,023	
Current tax expense		$ 7,849,023

To adjust current tax expense and current taxes payable to recognize the current tax benefit from deductible compensation cost upon exercise of share options.

718-20-55-22 The credit to additional paid-in capital is the tax benefit of the excess of the deductible amount over the recognized compensation cost [($22,425,780 – $10,981,157) ×.35 = $4,005,618].

Pending Content:

Transition Date: *(P) December 16, 2016; (N) December 16, 2017* | **Transition Guidance: 718-10-65-4**

[Paragraph superseded by Accounting Standards Update No. 2016-09]

718-20-55-23 If instead the share options expired unexercised, previously recognized compensation cost would not be reversed. There would be no deduction on the tax return and, therefore, the entire deferred tax asset of $3,843,405 would be charged to income tax expense or additional paid-in capital, to the extent of any remaining additional paid-in capital from **excess tax benefits** from previous awards accounted for in accordance with FASB Statement No. 123 (revised 2004), *Share-Based Payment*, or FASB Statement No. 123, *Accounting for Stock-Based Compensation* (see paragraphs 718-740-35-5 through 35-7). If employees terminated with out-of-the-money vested share options, the deferred tax asset related to those share options would be written off when those options expire. A write-off of a deferred tax asset related to a deficiency of deductible compensation cost in relation to recognized compensation cost for financial reporting purposes shall not be reflected in the statement of cash flows because the unit of account for cash flow purposes is an individual award (or portion thereof) as opposed to a portfolio of awards.

Pending Content:

Transition Date: *(P) December 16, 2016; (N) December 16, 2017* | **Transition Guidance: 718-10-65-4**

If instead the share options expired unexercised, previously recognized compensation cost would not be reversed. There would be no deduction on the tax return and, therefore, the entire deferred tax asset of $3,843,405 would be charged to income tax expense.

718-20-55-23A

Pending Content:

Transition Date: *(P) December 16, 2016; (N) December 16, 2017* | **Transition Guidance:** 718-10-65-5

If employees terminated with out-of-the-money vested share options, the deferred tax asset related to those share options would be written off when those options expire.

718-20-55-24 Topic 230 requires that the realized tax benefit related to the excess of the deductible amount over the compensation cost recognized be classified in the statement of cash flows as a cash inflow from financing activities and a cash outflow from operating activities. Under either the direct or indirect method of reporting cash flows, Entity T would disclose the following activity in its statement of cash flows for the year ended December 31, 20Y2.

Cash outflow from operating activities:	
Excess tax benefits from share-based payment arrangements	$ (4,005,618)
Cash inflow from financing activities:	
Excess tax benefits from share-based payment arrangements	$ 4,005,618

Pending Content:

Transition Date: *(P) December 16, 2016; (N) December 16, 2017* | **Transition Guidance:** 718-10-65-5

[Paragraph superseded by Accounting Standards Update No. 2016-09]

> > > Case B: Share Options with Graded Vesting

718-20-55-25 Paragraph 718-10-35-8 provides for the following two methods to recognize compensation cost for awards with graded vesting:

a. On a straight-line basis over the requisite service period for each separately vesting portion of the award as if the award was, in-substance, multiple awards (graded vesting attribution method)

b. On a straight-line basis over the requisite service period for the entire award (that is, over the requisite service period of the last separately vesting portion of the award), subject to the limitation noted in paragraph 718-10-35-8.

718-20-55-26 The choice of attribution method for awards with graded vesting schedules is a policy decision that is not dependent on an entity's choice of valuation technique. In addition, the choice of attribution method applies to awards with only service conditions.

718-20-55-27 The accounting is illustrated below for both methods and uses the same assumptions as those noted in Case A except for the vesting provisions.

718-20-55-28 Entity T awards 900,000 share options on January 1, 20X5, that vest according to a graded schedule of 25 percent for the first year of service, 25 percent for the second year, and the remaining 50 percent for the third year. Each employee is granted 300 share options. The following table shows the calculation as of January 1, 20X5, of the number of employees and the related number of share options expected to vest. Using the expected 3 percent annual forfeiture rate, 90 employees are expected to terminate during 20X5 without having vested in any portion of the award, leaving 2,910 employees to vest in 25 percent of the award (75 options). During 20X6, 87 employees are expected to terminate, leaving 2,823 to vest in the second 25 percent of the award. During 20X7, 85 employees are expected to terminate, leaving 2,738 employees to vest in the last 50 percent of the award. That results in a total of 840,675 share options expected to vest from the award of 900,000 share options with graded vesting.

Share Option—Graded Vesting—Estimated Amounts

Year	Number of Employees		Number of Vested Share Options	
	Total at date of grant	3,000		
20X5	3,000 – 90 (3,000 × .03) =	2,910	2,910 × 75 (300 × 25%) =	218,250
20X6	2,910 – 87 (2,910 × .03) =	2,823	2,823 × 75 (300 × 25%) =	211,725
20X7	2,823 – 85 (2,823 × .03) =	2,738	2,738 × 150 (300 × 50%) =	410,700
			Total vested options	840,675

718-20-55-29 The value of the share options that vest over the three-year period is estimated by separating the total award into three groups (or tranches) according to the year in which they vest (because the expected life for each tranche differs). The following table shows the estimated compensation cost for the share options expected to vest. The estimates of expected **volatility**, expected dividends, and risk-free interest rates are incorporated into the lattice, and the graded vesting conditions affect only the earliest date at which suboptimal exercise can occur (see paragraph 718-20-55-8 for information on suboptimal exercise). Thus, the fair value of each of the 3 groups of options is based on the same lattice inputs for expected volatility, expected dividend yield, and risk-free interest rates used to determine the value of $14.69 for the cliff-vesting share options (see paragraphs 718-20-55-7 through 55-9). The different vesting terms affect the ability of the suboptimal exercise to occur sooner (and affect other factors as well, such as volatility), and therefore there is a different expected term for each tranche.

Share Option—Graded Vesting—Estimated Cost

Year	Vested Options	Value per Option	Compensation Cost
20X5	218,250	$ 13.44	$ 2,933,280
20X6	211,725	14.17	3,000,143
20X7	410,700	14.69	6,033,183
	840,675		$ 11,966,606

718-20-55-30 Compensation cost is recognized over the periods of requisite service during which each tranche of share options is earned. Thus, the $2,933,280 cost attributable to the 218,250 share options that vest in 20X5 is recognized in 20X5. The $3,000,143 cost attributable to the 211,725 share options that vest at the end of 20X6 is recognized over the 2-year vesting period (20X5 and 20X6). The $6,033,183 cost attributable to the 410,700 share options that vest at the end of 20X7 is recognized over the 3-year vesting period (20X5, 20X6, and 20X7).

718-20-55-31 The following table shows how the $11,966,606 expected amount of compensation cost determined at the grant date is attributed to the years 20X5, 20X6, and 20X7.

Share Option—Graded Vesting—Computation of Estimated Cost

	Pretax Cost to Be Recognized		
	20X5	20X6	20X7
Share options vesting in 20X5	$ 2,933,280		
Share options vesting in 20X6	1,500,071	$ 1,500,072	
Share options vesting in 20X7	2,011,061	2,011,061	$ 2,011,061
Cost for the year	$ 6,444,412	$ 3,511,133	$ 2,011,061
Cumulative cost	$ 6,444,412	$ 9,955,545	$ 11,966,606

718-20-55-32 Entity T could use the same computation of estimated cost, as in the preceding table, but could elect to recognize compensation cost on a straight-line basis for all graded vesting awards. In that case, total compensation cost to be attributed on a straight-line basis over each year in the 3-year vesting period is approximately $3,988,868 ($11,966,606 ÷ 3). Entity T also could use a single weighted-average expected life to value the entire award and arrive at a different amount of total compensation cost. Total compensation cost could then be attributed on a straight-line basis over the three-year vesting period. However, this Topic requires that compensation cost recognized at any date must be at least equal to the amount attributable to options that are vested at that date. For example, if 50 percent of this same option award vested in the first year of the 3-year vesting period, 436,500 options [2,910 × 150 (300 × 50%)] would be vested at the end of 20X5. Compensation cost amounting to $5,866,560 (436,500 × $13.44) attributable to the vested awards would be recognized in the first year.

718-20-55-33 Compensation cost is adjusted for awards with graded vesting to reflect differences between estimated and actual forfeitures as illustrated for the cliff-vesting options, regardless of which method is used to estimate value and attribute cost.

718-20-55-34 Accounting for the tax effects of awards with graded vesting follows the same pattern illustrated in paragraphs 718-20-55-20 through 55-23. However, unless Entity T identifies and tracks the specific tranche from which share options are exercised, it would not know the recognized compensation cost that corresponds to exercised share options for purposes of calculating the tax effects resulting from that exercise. If an entity does not know the specific tranche from which share options are exercised, it should assume that options are exercised on a first-vested, first-exercised basis (which works in the same manner as the first-in, first-out [FIFO] basis for inventory costing).

> > > Case C: Share Options with Cliff Vesting and Forfeitures Recognized When They Occur

718-20-55-34A

Pending Content:

Transition Date: *(P) December 16, 2016; (N) December 16, 2017* | **Transition Guidance: 718-10-65-6**

This Case uses the same assumptions as Case A except that Entity T's accounting policy is to account for forfeitures when they occur in accordance with paragraph 718-10-35-3. Consequently, compensation cost previously recognized for an employee share option is reversed in the period in which forfeiture of the award occurs. Previously recognized compensation cost is not reversed if an employee share option for which the requisite service has been rendered expires unexercised. This Case also assumes that none of the compensation cost is capitalized as part of the cost of an asset.

718-20-55-34B

Pending Content:

Transition Date: *(P) December 16, 2016; (N) December 16, 2017* | **Transition Guidance: 718-10-65-6**

In 20X5, 20X6, and 20X7, share option forfeitures are 45,000, 47,344, and 60,130, respectively.

718-20-55-34C

Pending Content:

Transition Date: *(P) December 16, 2016; (N) December 16, 2017* | **Transition Guidance: 718-10-65-6**

The compensation cost to be recognized over the requisite service period at January 1, 20X5, is $13,221,000 (900,000 × $14.69), and the compensation cost to be recognized (excluding the effect of forfeitures) during each year of the 3-year vesting period is $4,407,000 ($13,221,000 ÷ 3). The journal entries for 20X5 to recognize compensation cost and related deferred tax benefit at the enacted tax rate of 35 percent are as follows.

Compensation cost	$ 4,407,000	
Additional paid-in capital		$ 4,407,000

To recognize compensation cost excluding the effect of forfeitures for 20X5.

Deferred tax asset	$ 1,542,450	
Deferred tax benefit		$ 1,542,450

To recognize the deferred tax asset for the temporary difference related to compensation cost ($4,407,000 × .35).

718-20-55-34D

Pending Content:

Transition Date: *(P) December 16, 2016; (N) December 16, 2017* | **Transition Guidance: 718-10-65-6**

During 20X5, 45,000 share options are forfeited; accordingly, Entity T remeasures compensation cost to reflect the effect of forfeitures when they occur and recognizes compensation costs for 855,000 (900,000 – 45,000) share options (net of forfeitures) at an amount of $12,559,950 (855,000 × $14.69) over the 3-year vesting period, or $4,186,650 each year ($12,559,950 ÷ 3). Therefore, Entity T reverses recognized compensation cost of $220,350 (45,000 share options × $14.69 ÷ 3) to account for forfeitures that occurred during 20X5. The journal entries to recognize the effect of forfeitures during 20X5 and the related reduction in the deferred tax benefit are as follows.

Additional paid-in capital	$ 220,350	
Compensation cost		$ 220,350

To recognize the effect of forfeitures on compensation cost when they occur for 20X5.

Deferred tax benefit	$ 77,123	
Deferred tax asset		$ 77,123

To reverse the deferred tax asset related to the forfeited awards ($220,350 × .35).

718-20-55-34E

Pending Content:

Transition Date: *(P) December 16, 2016; (N) December 16, 2017* | **Transition Guidance: 718-10-65-6**

As of January 1, 20X6, Entity T determines the compensation cost and related tax effects to recognize during 20X6. The journal entries for 20X6 to recognize compensation cost and related deferred tax benefit at the enacted tax rate of 35 percent are as follows (excluding the effect of forfeitures in 20X6).

Compensation cost	$ 4,186,650	
Additional paid-in capital		$ 4,186,650

To recognize compensation cost excluding the effect of awards that forfeited during 20X6.

Deferred tax asset	$ 1,465,328	
Deferred tax benefit		$ 1,465,328

To recognize the deferred tax asset for the temporary difference related to compensation cost ($4,186,650 × .35).

718-20-55-34F

Pending Content:

Transition Date: *(P) December 16, 2016; (N) December 16, 2017* | **Transition Guidance: 718-10-65-6**

In 20X6, 47,344 share options are forfeited (that is, 92,344 share options in total have been forfeited by December 31, 20X6); accordingly, Entity T would recognize compensation cost for 807,656 share options over the 3-year vesting period. On the basis of actual forfeitures in 20X5 and 20X6, Entity T should recognize a cumulative compensation cost of $11,864,467 (807,656 × $14.69) for the 3-year vesting period, or $3,954,822 a year ($11,864,467 ÷ 3 years). Therefore, Entity T reverses recognized compensation cost of $231,828 ($4,186,650 – $3,954,822) for 20X5 and 20X6, or $463,656 in total, to account for forfeitures that occurred during 20X6. The journal entries to recognize the effect of forfeitures during 20X6 and the related reduction in the deferred tax benefit are as follows.

Additonal paid-capital	$ 463,656	
Compensation cost		$ 463,656

To recognize the effect of the forfeitures on compensation cost when they occur for 20X6.

Deferred tax benefit	$ 162,280	
Deferred tax asset		$ 162,280

To reverse the deferred tax asset related to the forfeited awards ($463,656 × .35).

718-20-55-34G

Pending Content:

Transition Date: *(P) December 16, 2016; (N) December 16, 2017* | **Transition Guidance: 718-10-65-6**

Entity T follows the same approach in 20X7 as it applied in 20X6 to recognize compensation cost and related tax effects.

> > Example 2: Share Option Award Under Which the Number of Options to Be Earned Varies

718-20-55-35 This Example illustrates the guidance in paragraph 718-10-30-15.

718-20-55-36 This Example shows the computation of compensation cost if Entity T grants an award of share options with multiple performance conditions. Under the award, employees vest in differing numbers of options depending on the amount by which the market share of one of Entity T's products increases over a three-year period (the share options cannot vest before the end of the three-year period). The three-year **explicit service period** represents the requisite service period. On January 1, 20X5, Entity T grants to each of 1,000 employees an award of up to 300 10-year-term share options on its common stock. If market share increases by at least 5 percentage points by December 31, 20X7, each employee vests in at least 100 share options at that date. If market share increases by at least 10 percentage points, another 100 share options vest, for a total of 200. If market share increases by more than 20 percentage points, each employee vests in all 300 share options. Entity T's share price on January 1, 20X5, is $30 and other assumptions are the same as in Example 1 (see paragraph 718-20-55-4). The grant-date fair value per share option is $14.69. While the vesting conditions in this Example and in Example 1 (see paragraph 718-20-55-4) are different, the equity instruments being valued have the same estimate of grant-date fair value. That is a consequence of the modified grant-date method, which accounts for the effects of vesting requirements or other restrictions that apply during the vesting period by recognizing compensation cost only for the instruments that actually vest. (This discussion does not refer to awards with market conditions that affect exercisability or the ability to retain the award as described in paragraphs 718-10-55-60 through 55-63.)

718-20-55-37 The compensation cost of the award depends on the estimated number of options that will vest. Entity T must determine whether it is **probable** that any **performance condition** will be achieved, that is, whether the growth in market share over the 3-year period will be at least 5 percent. Accruals of compensation cost are initially based on the probable outcome of the performance conditions—in this case, different levels of market share growth over the three-year vesting period—and adjusted for subsequent changes in the estimated or actual outcome. If Entity T determines that no performance condition is probable of achievement (that is, market share growth is expected to be less than 5 percentage points), then no compensation cost is recognized; however, Entity T is required to reassess at each reporting date whether achievement of any performance condition is probable and would begin recognizing compensation cost if and when achievement of the performance condition becomes probable.

718-20-55-38 Paragraph 718-10-25-20 requires accruals of cost to be based on the probable outcome of performance conditions. Accordingly, this Topic prohibits Entity T from basing accruals of compensation cost on an amount that is not a possible outcome (and thus cannot be the probable outcome). For instance, if Entity T estimates that there is a 90 percent, 30 percent, and 10 percent likelihood that market share growth will be at least 5 percentage points, at least 10 percentage points, and greater than 20 percentage points, respectively, it would not try to determine a weighted average of the possible outcomes because that number of shares is not a possible outcome under the arrangement.

718-20-55-39 The following table shows the compensation cost that would be recognized in 20X5, 20X6, and 20X7 if Entity T estimates at the grant date that it is probable that market share will increase at least 5 but less than 10 percentage points (that is, each employee would receive 100 share options). That estimate remains unchanged until the end of 20X7, when Entity T's market share has increased over the 3-year period by more than 10 percentage points. Thus, each employee vests in 200 share options.

718-20-55-40 As in Example 1, Case A (see paragraph 718-20-55-10), Entity T experiences actual forfeiture rates of 5 percent in 20X5, and in 20X6 changes its estimate of forfeitures for the entire award from 3 percent to 6 percent per year. In 20X6, cumulative compensation cost is adjusted to reflect the higher forfeiture rate. By the end of 20X7, a 6 percent forfeiture rate has been experienced, and no further adjustments for forfeitures are necessary. Through 20X5, Entity T estimates that 913 employees ($1,000 \times .97^3$) will remain in service until the vesting date. At the end of 20X6, the number of employees estimated to remain in service is adjusted for the higher forfeiture rate, and the number of employees estimated to remain in service is 831 ($1,000 \times .94^3$). The compensation cost of the award is initially estimated based on the number of options expected to vest, which in turn is based on the expected level of performance and the fair value of each option. That amount would be adjusted as needed for changes in the estimated and actual forfeiture rates and for differences between estimated and actual market share growth. The amount of compensation cost recognized (or attributed) when achievement of a performance condition is probable depends on the relative satisfaction of the performance condition based on performance to date. Entity T determines that recognizing compensation cost ratably over the three-year vesting period is appropriate with one-third of the value of the award recognized each year.

Share Option with Performance Condition—Number of Share Options Varies

Year	Total Value of Award	Pretax Cost for Year	Cumulative Pretax Cost
20X5	$1,341,197 ($14.69 × 100 × 913)	$447,066 ($1,341,197 ÷ 3)	$ 447,066
20X6	$1,220,739 ($14.69 × 100 × 831)	$366,760 [($1,220,739 × 2/3) – $447,066]	$ 813,826
20X7	$2,441,478 ($14.69 × 200 × 831)	$1,627,652 ($2,441,478 – $813,826)	$ 2,441,478

> > Example 3: Share Option Award under Which the Exercise Price Varies

718-20-55-41 This Example illustrates the guidance in paragraph 718-10-30-15.

718-20-55-42 This Example shows the computation of compensation cost if Entity T grants a share option award with a performance condition under which the exercise price, rather than the number of shares, varies depending on the level of performance achieved. On January 1, 20X5, Entity T grants to its chief executive officer 10-year share options on 10,000 shares of its common stock, which are immediately vested and exercisable (an explicit service period of zero). The share price at the grant date is $30, and the initial exercise price also is $30. However, that price decreases to $15 if the market share for Entity T's products increases by at least 10 percentage points by December 31, 20X6, and provided that the chief executive officer continues to be employed by Entity T and has not previously exercised the options (an explicit service period of 2 years, which also is the requisite service period).

718-20-55-43 Entity T estimates at the grant date the expected level of market share growth, the exercise price of the options, and the expected term of the options. Other assumptions, including the risk-free interest rate and the service period over which the cost is attributed, are consistent with those estimates. Entity T estimates at the grant date that its market share growth will be at least 10 percentage points over the 2-year performance period, which means that the expected exercise price of the share options is $15, resulting in a fair value of $19.99 per option. Option value is determined using the same assumptions noted in paragraph 718-20-55-7 except the exercise price is $15 and the award is not exercisable at $15 per option for 2 years.

718-20-55-44 Total compensation cost to be recognized if the performance condition is satisfied would be $199,900 (10,000 x $19.99). Paragraph 718-10-30-15 requires that the fair value of both awards with service conditions and awards with performance conditions be estimated as of the date of grant. Paragraph 718-10-35-3 also requires recognition of cost for the number of instruments for which the requisite service is provided. For this performance award, Entity T also selects the expected assumptions at the grant date if the performance goal is not met. If market share growth is not at least 10 percentage points over the 2-year period, Entity T estimates a fair value of $13.08 per option. Option value is determined using the same assumptions noted in paragraph 718-20-55-7 except the award is immediately vested.

718-20-55-45 Total compensation cost to be recognized if the performance goal is not met would be $130,800 (10,000 × $13.08). Because Entity T estimates that the performance condition would be satisfied, it would recognize compensation cost of $130,800 on the date of grant related to the fair value of the fully vested award and recognize compensation cost of $69,100 ($199,900 – $130,800) over the 2-year requisite service period related to the condition. Because of the nature of the performance condition, the award has multiple requisite service periods that affect the manner in which compensation cost is attributed. Paragraphs 718-10-55-67 through 55-79 provide guidance on estimating the requisite service period.

718-20-55-46 During the two-year requisite service period, adjustments to reflect any change in estimate about satisfaction of the performance condition should be made, and, thus, aggregate cost recognized by the end of that period reflects whether the performance goal was met.

> > Example 4: Share Option Award with Other Performance Conditions

718-20-55-47 This Example illustrates the guidance in paragraphs 718-10-30-15.

718-20-55-48 While performance conditions usually affect vesting conditions, they may affect exercise price, contractual term, quantity, or other factors that affect an award's fair value before, at the time of, or after vesting. This Topic requires that all performance conditions be accounted for similarly. A potential grant-date fair value is estimated for each of the possible outcomes that are reasonably determinable at the grant date and associated with the performance condition(s) of the award (as demonstrated in Example 3 [see paragraph 718-20-55-41)]. Compensation cost ultimately recognized is equal to the grant-date fair value of the award that coincides with the actual outcome of the performance condition(s).

718-20-55-49 To illustrate the notion described in the preceding paragraph and attribution of compensation cost if performance conditions have different service periods, assume Entity C grants 10,000 at-the-money share options on its common stock to an employee. The options have a 10-year contractual term. The share options vest upon successful completion of phase-two clinical trials to satisfy regulatory testing requirements related to a developmental drug therapy. Phase-two clinical trials are scheduled to be completed (and regulatory approval of that phase obtained) in approximately 18 months; hence, the **implicit service period** is approximately 18 months. Further, the share options will become fully transferable upon regulatory approval of the drug therapy (which is scheduled to occur in approximately four years). The implicit service period for that performance condition is approximately 30 months (beginning once phase-two clinical trials are successfully completed). Based on the nature of the performance conditions, the award has multiple requisite service periods (one pertaining to each performance condition) that affect the pattern in which compensation cost is attributed. Paragraphs 718-10-55-67 through 55-79 and 718-10-55-86 through 55-88 provide guidance on estimating the requisite service period of an award. The determination of whether compensation cost should be recognized depends on Entity C's assessment of whether the performance conditions are **probable** of achievement. Entity C expects that all performance conditions will be achieved. That assessment is based on the relevant facts and circumstances, including Entity C's historical success rate of bringing developmental drug therapies to market.

718-20-55-50 At the grant date, Entity C estimates that the potential fair value of each share option under the 2 possible outcomes is $10 (Outcome 1, in which the share options vest and do not become transferable) and $16 (Outcome 2, in which the share options vest and do become transferable). The difference in estimated fair values of each outcome is due to the change in estimate of the expected term of the share option. Outcome 1 uses an expected term in estimating fair value that is less than the expected term used for Outcome 2, which is equal to the award's 10-year contractual term. If a share option is transferable, its expected term is equal to its contractual term (see paragraph 718-10-55-29). If Outcome 1 is considered probable of occurring, Entity C would recognize $100,000 (10,000 × $10) of compensation cost ratably over the 18-month requisite service period related to the successful completion of phase-two clinical trials. If Outcome 2 is considered probable of occurring, then Entity C would recognize an additional $60,000 [10,000 × ($16 – $10)] of compensation cost ratably over the 30-month requisite service period (which begins after phase-two clinical trials are successfully completed) related to regulatory approval of the drug therapy. Because Entity C believes that Outcome 2 is probable, it recognizes compensation cost in the pattern described. However, if circumstances change and it is determined at the end of Year 3 that the regulatory approval of the developmental drug therapy is likely to be obtained in six years rather than four, the requisite service period for Outcome 2 is revised, and the remaining unrecognized compensation cost would be recognized prospectively through Year 6. On the other hand, if it becomes probable that Outcome 2 will not occur, compensation cost recognized for Outcome 2, if any, would be reversed.

> > Example 5: Share Option with a Market Condition—Indexed Exercise Price

718-20-55-51 This Example illustrates the guidance in paragraph 718-10-30-15.

718-20-55-52 Entity T grants share options whose exercise price varies with an index of the share prices of a group of entities in the same industry, that is, a **market condition**. Assume that on January 1, 20X5, Entity T grants 100 share options on its common stock with an initial exercise price of $30 to each of 1,000 employees. The share options have a maximum term of 10 years. The exercise price of the share options increases or decreases on December 31 of each year by the same percentage that the index has increased or decreased during the year. For example, if the peer group index increases by 10 percent in 20X5, the exercise price of the share options during 20X6 increases to $33 ($30 × 1.10). On January 1, 20X5, the peer group index is assumed to be 400. The dividend yield on the index is assumed to be 1.25 percent.

718-20-55-53 Each indexed share option may be analyzed as a share option to exchange 0.0750 (30 ÷ 400) shares of the peer group index for a share of Entity T stock—that is, to exchange one noncash asset for another noncash asset. A share option to purchase stock for cash also can be thought of as a share option to exchange one asset (cash in the amount of the exercise price) for another (the share of stock). The intrinsic value of a cash share option equals the difference between the price of the stock upon exercise and the amount—the price—of the cash exchanged for the stock. The intrinsic value of a share option to exchange 0.0750 shares of the peer group index for a share of Entity T stock also equals the difference between the prices of the two assets exchanged.

718-20-55-54 To illustrate the equivalence of an indexed share option and the share option above, assume that an employee exercises the indexed share option when Entity T's share price has increased 100 percent to $60 and the peer group index has increased 75 percent, from 400 to 700. The exercise price of the indexed share option thus is $52.50 ($30 × 1.75).

Price of Entity T share	$60.00
Less: Exercise price of share option	52.50
Intrinsic value of indexed share option	$ 7.50

718-20-55-55 That is the same as the intrinsic value of a share option to exchange 0.0750 shares of the index for 1 share of Entity T stock.

Price of Entity T share	$60.00
Less: Price of a share of the peer group index (.0750 × $700)	52.50
Intrinsic value at exchange	$ 7.50

718-20-55-56 Option-pricing models can be extended to value a share option to exchange one asset for another. The principal extension is that the volatility of a share option to exchange two noncash assets is based on the relationship between the volatilities of the prices of the assets to be exchanged—their **cross-volatility**. In a share option with an exercise price payable in cash, the amount of cash to be paid has zero volatility, so only the volatility of the stock needs to be considered in estimating that option's fair value. In contrast, the fair value of a share option to exchange two noncash assets depends on possible movements in the prices of both assets—in this Example, fair value depends on the cross-volatility of a share of the peer group index and a share of Entity T stock. Historical cross-volatility can be computed directly based on measures of Entity T's share price in shares of the peer group index. For example, Entity T's share price was 0.0750 shares at the grant date and 0.0857 (60 ÷ 700) shares at the exercise date. Those share amounts then are used to compute cross-volatility. Cross-volatility also can be computed indirectly based on the respective volatilities of Entity T stock and the peer group index and the correlation between them. The expected cross-volatility between Entity T stock and the peer group index is assumed to be 30 percent.

718-20-55-57 In a share option with an exercise price payable in cash, the assumed risk-free interest rate (discount rate) represents the return on the cash that will not be paid until exercise. In this Example, an equivalent share of the index, rather than cash, is what will not be paid until exercise. Therefore, the dividend yield on the peer group index of 1.25 percent is used in place of the risk-free interest rate as an input to the option-pricing model.

718-20-55-58 The initial exercise price for the indexed share option is the value of an equivalent share of the peer group index, which is $30 (0.0750 × $400). The fair value of each share option granted is $7.55 based on the following inputs.

Share price	$ 30
Exercise price	$ 30
Dividend yield	1.00%
Discount rate	1.25%
Volatility	30%
Contractual term	10 years
Suboptimal exercise factor	1.10

718-20-55-59 In this Example, the suboptimal exercise factor is 1.1. In Example 1 (see paragraph 718-20-55-4), the suboptimal exercise factor is 2.0. See paragraph 718-20-55-8 for an explanation of the meaning of a suboptimal exercise factor of 2.0.

718-20-55-60 The indexed share options have a three-year explicit service period. The market condition affects the grant-date fair value of the award and its exercisability; however, vesting is based solely on the explicit service period of three years. The at-the-money nature of the award makes the **derived service period** irrelevant in determining the requisite service period in this Example; therefore, the requisite service period of the award is three years based on the explicit service period. The accrual of compensation cost would be based on the number of options for which the requisite service is expected to be rendered (which is not addressed in this Example). That cost would be recognized over the requisite service period as shown in Example 1 (see paragraph 718-20-55-4).

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The indexed share options have a three-year explicit service period. The market condition affects the grant-date fair value of the award and its exercisability; however, vesting is based solely on the explicit service period of three years. The at-the-money nature of the award makes the **derived service period** irrelevant in determining the requisite service period in this Example; therefore, the requisite service period of the award is three years based on the explicit service period. The accrual of compensation cost would be based on the number of options for which the requisite service is rendered or is expected to be rendered depending on an entity's accounting policy in accordance with paragraph 718-10-35-3 (which is not addressed in this Example). That cost would be recognized over the requisite service period as shown in Example 1 (see paragraph 718-20-55-4).

> > Example 6: Share Unit with Performance and Market Conditions

718-20-55-61 This Example illustrates the guidance in paragraphs 718-10-25-20 through 25-21, 718-10-30-27, and 718-10-35-4.

718-20-55-62 Entity T grants 100,000 share units to each of 10 vice presidents (1 million share units in total) on January 1, 20X5. Each **share unit** has a contractual term of three years and a vesting condition based on performance. The performance condition is different for each vice president and is based on specified goals to be achieved over three years (an explicit three-year service period). If the specified goals are not achieved at the end of three years, the share units will not vest. Each share unit is convertible into shares of Entity T at contractual maturity as follows:

a. If Entity T's share price has appreciated by a percentage that exceeds the percentage appreciation of the S&P 500 index by at least 10 percent (that is, the relative percentage increase is at least 10 percent), each share unit converts into 3 shares of Entity T stock.

b. If the relative percentage increase is less than 10 percent but greater than zero percent, each share unit converts into 2 shares of Entity T stock.

c. If the relative percentage increase is less than or equal to zero percent, each share unit converts into 1 share of Entity T stock.

d. If Entity T's share price has depreciated, each share unit converts into zero shares of Entity T stock.

718-20-55-63 Appreciation or depreciation for Entity T's share price and the S&P 500 index is measured from the grant date.

718-20-55-64 This market condition affects the ability to retain the award because the conversion ratio could be zero; however, vesting is based solely on the explicit service period of three years, which is equal to the contractual maturity of the award. That set of circumstances makes the derived service period irrelevant in determining the requisite service period; therefore, the requisite service period of the award is three years based on the explicit service period.

718-20-55-65 The share units' conversion feature is based on a variable target stock price (that is, the target stock price varies based on the S&P 500 index); hence, it is a market condition. That market condition affects the fair value of the share units that vest. Each vice president's share units vest only if the individual's performance condition is achieved; consequently, this award is accounted for as an award with a performance condition (see paragraphs 718-10-55-60 through 55-63). This Example assumes that all share units become fully vested; however, if the share units do not vest because the performance conditions are not achieved, Entity T would reverse any previously recognized compensation cost associated with the nonvested share units.

718-20-55-66 The grant-date fair value of each share unit is assumed for purposes of this Example to be $36. Certain option-pricing models, including Monte Carlo simulation techniques, have been adapted to value path-dependent options and other complex instruments. In this case, the entity concludes that a Monte Carlo simulation technique provides a reasonable estimate of fair value. Each simulation represents a potential outcome, which determines whether a share unit would convert into three, two, one, or zero shares of stock. For simplicity, this Example assumes that no forfeitures will occur during the vesting period. The grant-date fair value of the award is $36 million (1 million × $36); management of Entity T expects that all share units will vest because the performance conditions are **probable** of achievement. Entity T recognizes compensation cost of $12 million ($36 million ÷ 3) in each year of the 3-year service period; the following journal entries are recognized by Entity T in 20X5, 20X6, and 20X7.

Compensation cost	$12,000,000	
Additional paid-in capital		$ 12,000,000

To recognize compensation cost.

Deferred tax asset	$ 4,200,000	
Deferred tax benefit		$ 4,200,000

To recognize the deferred tax asset for the temporary difference related to compensation cost ($12,000,000 ×.35 = $4,200,000).

718-20-55-67 Upon contractual maturity of the share units, four outcomes are possible; however, because all possible outcomes of the market condition were incorporated into the share units' grant-date fair value, no other entry related to compensation cost is necessary to account for the actual outcome of the market condition. However, if the share units' conversion ratio was based on achieving a performance condition rather than on satisfying a market condition, compensation cost would be adjusted according to the actual outcome of the performance condition (see Example 4 [paragraph 718-20-55-47]).

> > Example 7: Share Option with Exercise Price that Increases by a Fixed Amount or Fixed Percentage

718-20-55-68 This Example illustrates the guidance in paragraph 718-10-30-15.

718-20-55-69 Some entities grant share options with exercise prices that increase by a fixed amount or a constant percentage periodically. For example, the exercise price of the share options in Example 1 (see paragraph 718-20-55-4) might increase by a fixed amount of $2.50 per year. Lattice models and other valuation techniques can be adapted to accommodate exercise prices that change over time by a fixed amount. Such an arrangement has a market condition and may have a derived service period.

718-20-55-70 Share options with exercise prices that increase by a constant percentage also can be valued using an option-pricing model that accommodates changes in exercise prices. Alternatively, those share options can be valued by deducting from the discount rate the annual percentage increase in the exercise price. That method works because a decrease in the risk-free interest rate and an increase in the exercise price have a similar effect—both reduce the share option value. For example, the exercise price of the share options in Example 1 (see paragraph 718-20-55-4) might increase at the rate of 1 percent annually. For that example, Entity T's share options would be valued based on a risk-free interest rate less 1 percent. Holding all other assumptions constant from that Example, the value of each share option granted by Entity T would be $14.34.

> > Example 8: Share Award Granted by a Nonpublic Entity

718-20-55-71 The Example illustrates the guidance in paragraphs 718-10-30-17 through 30-19and 718-740-25-2 through 25-4.The accounting demonstrated in this Example also would be applicable to a public entity that grants share awards to its employees. The same measurement method and basis is used for both nonvested share awards and **restricted share** awards (which are a subset of nonvested share awards).

718-20-55-72 On January 1, 20X6, Entity W, a **nonpublic entity**, grants 100 shares of stock to each of its 100 employees. The shares cliff vest at the end of three years. Entity W estimates that the grant-date fair value of 1 share of stock is $7. The grant-date fair value of the share award is $70,000 (100 × 100 × $7). The fair value of shares, which is equal to their intrinsic value, is not subsequently remeasured. For simplicity, the example assumes that no forfeitures occur during the vesting period. Because the requisite service period is 3 years, Entity W recognizes $23,333 ($70,000 ÷ 3) of compensation cost for each annual period as follows.

Compensation cost	$23,333	
Additional paid-in capital		$23,333

To recognize compensation cost.

Deferred tax asset	$8,167	
Deferred tax benefit		$8,167

To recognize the deferred tax asset for the temporary difference related to compensation cost ($23,333 ×.35 = $8,167).

718-20-55-73 After three years, all shares are vested. For simplicity, this Example assumes that no employees made an Internal Revenue Service (IRS) Code §83(b) election and Entity W has already recognized its income tax expense for the year in which the shares become vested without regard to the effects of the share award. (IRS Code §83(b) permits an employee to elect either the grant date or the vesting date for measuring the fair market value of an award of shares.)

718-20-55-74 The fair value per share on the vesting date, assumed to be $20, is deductible for tax purposes. Paragraph 718-740-45-2 requires that excess tax benefits be recognized as a credit to additional paid-in capital. Tax return deductions that are less than compensation cost recognized result in a charge to income tax expense in the period of vesting unless there are any remaining excess tax benefits from previous awards accounted for in accordance with a fair value based method of accounting, in which case, the amount of any tax deficiency is first offset against additional paid-in capital. Paragraphs 718-740-35-5 through 35-9 establish the requirements for the accounting for a tax deficiency. With the share price at $20 on the vesting date, the deductible amount is $200,000 (10,000 × $20). The entity has sufficient taxable income, and the tax benefit realized is $70,000 ($200,000 ×.35).

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The fair value per share on the vesting date, assumed to be $20, is deductible for tax purposes. Paragraph 718-740-35-2 requires that the tax effect be recognized as income tax expense or benefit in the income statement for the difference between the deduction for an award for tax purposes and the cumulative compensation cost of that award recognized for financial reporting purposes. With the share price at $20 on the vesting date, the deductible amount is $200,000 (10,000 × $20), and the tax benefit is $70,000 ($200,000 ×.35).

718-20-55-75 At vesting the journal entries would be as follows.

Deferred tax expense	$24,500	
Deferred tax asset		$24,500

To write off deferred tax asset related to deductible share award at vesting ($70,000 ×.35 = $24,500).

Current taxes payable	$ 70,000	
Current tax expense		$ 24,500
Additional paid-in capital		$ 45,500

To adjust current tax expense and current taxes payable to recognize the current tax benefit from deductible compensation cost upon vesting of share award. The credit to additional paid-in capital is the excess tax benefit: ($200,000 − $70,000) ×.35 = $45,500.

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At vesting the journal entries would be as follows.

Deferred tax expense	$24,500	
Deferred tax asset		$24,500

To write off deferred tax asset related to deductible share award at vesting ($70,000 ×.35 = $24,500).

Current taxes payable	$ 70,000	
Current tax expense		$ 70,000

To adjust current tax expense and current taxes payable to recognize the current tax benefit from deductible compensation cost upon vesting of share award.

> > Example 9: Share Award Granted by a Nonpublic Entity that Uses the Calculated Value Method

718-20-55-76 This Example illustrates the guidance in paragraph 718-10-30-20.

718-20-55-77 On January 1, 20X6, Entity W, a small nonpublic entity that develops, manufactures, and distributes medical equipment, grants 100 share options to each of its 100 employees. The share price at the grant date is $7. The options are granted at-the-money, cliff vest at the end of 3 years, and have a 10-year contractual term. Entity W estimates the expected term of the share options granted as 5 years and the risk-free rate as 3.75 percent. For simplicity, this Example assumes that no forfeitures occur during the vesting period and that no dividends are expected to be paid in the future, and this Example does not reflect the accounting for income tax consequences of the awards.

718-20-55-78 Entity W does not maintain an internal market for its shares, which are rarely traded privately. It has not issued any new equity or convertible debt instruments for several years and has been unable to identify any similar entities that are public. Entity W has determined that it is not practicable for it to estimate the expected volatility of its share price and, therefore, it is not possible for it to reasonably estimate the grant-date fair value of the share options. Accordingly, Entity W is required to apply the provisions of paragraph 718-10-30-20 in accounting for the share options under the **calculated value** method.

718-20-55-79 Entity W operates exclusively in the medical equipment industry. It visits the Dow Jones Indexes website and, using the Industry Classification Benchmark, reviews the various industry sector components of the Dow Jones U.S. Total Market Index. It identifies the medical equipment subsector, within the health care equipment and services sector, as the most appropriate industry sector in relation to its operations. It reviews the current components of the medical equipment index and notes that, based on the most recent assessment of its share price and its issued share capital, in terms of size it would rank among entities in the index with a small market capitalization (or small-cap entities). Entity W selects the small-cap version of the medical equipment index as an appropriate industry sector index because it considers that index to be representative of its size and the industry sector in which it operates. Entity W obtains the historical daily closing total return values of the selected index for the five years immediately before January 1, 20X6, from the Dow Jones Indexes website. It calculates the annualized historical volatility of those values to be 24 percent, based on 252 trading days per year.

718-20-55-80 Entity W uses the inputs that it has determined above in a Black-Scholes-Merton option-pricing formula, which produces a value of $2.05 per share option. This results in total compensation cost of $20,500 (10,000 × $2.05) to be accounted for over the requisite service period of 3 years.

718-20-55-81 For each of the 3 years ending December 31, 20X6, 20X7, and 20X8, Entity W will recognize compensation cost of $6,833 ($20,500 ÷ 3). The journal entry for each year is as follows.

Compensation cost	$6,833	
Additional paid-in capital		$6,833

To recognize compensation cost.

718-20-55-82 The share option award granted by a nonpublic entity that used the calculated value method is as follows.

Share Option Award Granted by a Nonpublic Entity That Uses the Calculated Value Method

Year	Total Calculated Value of Award	Pretax Cost for Year	Cumulative Pretax Cost
20X6	$20,500 (10,000 × $2.05)	$6,833 ($20,500 ÷ 3)	$ 6,833
20X7	$20,500 (10,000 × $2.05)	$6,834 ($20,500 × ⅔ – $6,833)	$ 13,667
20X8	$20,500 (10,000 × $2.05)	$6,833 ($20,500 – $13,667)	$ 20,500

718-20-55-83 Assuming that all 10,000 share options are exercised on the same day in 20Y2, the accounting for the option exercise will follow the same pattern as in Example 1, Case A (see paragraph 718-20-55-10) and will result in the following journal entry.

At exercise the journal entry is as follows.

Cash (10,000 × $7)	$ 70,000	
Additional paid-in capital	$ 20,500	
Common stock		$ 90,500

To recognize the issuance of shares upon exercise of options and to reclassify previously recognized paid-in capital.

> > Example 10: Share Award with a Clawback Feature

718-20-55-84 This Example illustrates the guidance in paragraph 718-20-35-2.

718-20-55-85 On January 1, 20X5, Entity T grants its chief executive officer an award of 100,000 shares of stock that vest upon the completion of 5 years of service. The market price of Entity T's stock is $30 per share on that date. The grant-date fair value of the award is $3,000,000 (100,000 × $30). The shares become freely transferable upon vesting; however, the award provisions specify that, in the event of the employee's termination and subsequent employment by a direct competitor (as defined by the award) within three years after vesting, the shares or their cash equivalent on the date of employment by the direct competitor must be returned to Entity T for no consideration (a clawback feature). The chief executive officer completes five years of service and vests in the award. Approximately two years after vesting in the share award, the chief executive officer terminates employment and is hired as an employee of a direct competitor. Paragraph 718-10-55-8 states that contingent features requiring an employee to transfer equity shares earned or realized gains from the sale of equity instruments earned as a result of **share-based payment arrangements** to the issuing entity for consideration that is less than fair value on the date of transfer (including no consideration) are not considered in estimating the fair value of an equity instrument on the date it is granted. Those features are accounted for if and when the contingent event occurs by recognizing the consideration received in the corresponding balance sheet account and a credit in the income statement equal to the lesser of the recognized compensation cost of the share-based payment arrangement that contains the contingent feature ($3,000,000) and the fair value of the consideration received. This guidance does not apply to cancellations of awards of equity instruments as discussed in paragraphs 718-20-35-7 through 35-9. The former chief executive officer returns 100,000 shares of Entity T's common stock with a total market value of $4,500,000 as a result of the award's provisions. The following journal entry accounts for that event.

Treasury stock	$4,500,000	
Additional paid-in capital		$1,500,000
Other income		$3,000,000

To recognize the receipt of consideration as a result of the clawback feature.

718-20-55-86 If instead of delivering shares to Entity T, the former chief executive officer had paid cash equal to the total market value of 100,000 shares of Entity T's common stock, the following journal entry would have been recorded.

Cash	$ 4,500,000	
Additional paid-in capital		$ 1,500,000
Other income		$ 3,000,000

To recognize the receipt of consideration as a result of the clawback feature.

> > Example 11: Certain Noncompete Agreements and Requisite Service

718-20-55-87 Paragraphs 718-10-25-3 through 25-4 require that the accounting for all share-based payment transactions with employees or others reflect the rights conveyed to the holder of the instruments and the obligations imposed on the issuer of the instruments, regardless of how those transactions are structured. Some share-based compensation arrangements with employees may contain noncompete provisions. Those noncompete provisions may be in-substance service conditions because of their nature. Determining whether a noncompete provision or another type of provision represents an in-substance **service condition** is a matter of judgment based on relevant facts and circumstances. This Example illustrates a situation in which a noncompete provision represents an in-substance service condition.

Pending Content:

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Paragraphs 718-10-25-3 through 25-4 require that the accounting for all **share-based payment transactions** with employees or others reflect the rights conveyed to the holder of the instruments and the obligations imposed on the issuer of the instruments, regardless of how those transactions are structured. Some share-based compensation arrangements with employees may contain noncompete provisions. Those noncompete provisions may be in-substance service conditions because of their nature. Determining whether a noncompete provision or another type of provision represents an in-substance **service condition** is a matter of judgment based on relevant facts and circumstances. This Example illustrates a situation in which a noncompete provision represents an in-substance service condition.

718-20-55-88 Entity K is a professional services firm in which retention of qualified employees is important in sustaining its operations. Entity K's industry expertise and relationship networks are inextricably linked to its employees; if its employees terminate their employment relationship and work for a competitor, the entity's operations may be adversely impacted.

718-20-55-89 As part of its compensation structure, Entity K grants 100,000 restricted share units to an employee on January 1, 20X6. The fair value of the restricted share units represents approximately four times the expected future annual total compensation of the employee. The restricted share units are fully vested as of the date of grant, and retention of the restricted share units is not contingent on future service to Entity K. However, the units are transferred to the employee based on a 4-year delayed-transfer schedule (25,000 restricted share units to be transferred beginning on December 31, 20X6, and on December 31 in each of the 3 succeeding years) if and only if specified noncompete conditions are satisfied. The restricted share units are convertible into unrestricted shares any time after transfer.

718-20-55-90 The noncompete provisions require that no work in any capacity may be performed for a competitor (which would include any new competitor formed by the employee). Those noncompete provisions lapse with respect to the restricted share units as they are transferred. If the noncompete provisions are not satisfied, the employee loses all rights to any restricted share units not yet transferred. Additionally, the noncompete provisions stipulate that Entity K may seek other available legal remedies, including damages from the employee. Entity K has determined that the noncompete is legally enforceable and has legally enforced similar arrangements in the past.

718-20-55-91 The nature of the noncompete provision (being the corollary condition of active employment), the provision's legal enforceability, the employer's intent to enforce and past practice of enforcement, the delayed-transfer schedule mirroring the lapse of noncompete provisions, the magnitude of the award's fair value in relation to the employee's expected future annual total compensation, and the severity of the provision limiting the employee's ability to work in the industry in any capacity are facts that provide a preponderance of evidence suggesting that the arrangement is designed to compensate the employee for future service in spite of the employee's ability to terminate the employment relationship during the service period and retain the award (assuming satisfaction of the noncompete provision). Consequently, Entity K would recognize compensation cost related to the restricted share units over the four-year substantive service period.

718-20-55-92 Example 10 (see paragraph 718-20-55-84) provides an illustration of another noncompete agreement. That Example and this one are similar in that both noncompete agreements are not contingent upon employment termination (that is, both agreements may activate and lapse during a period of active employment after the vesting date). A key difference between the two Examples is that the award recipient in that Example must provide five years of service to vest in the award (as opposed to vesting immediately). Another key difference is that the award recipient in that Example receives the shares upon vesting and may sell them immediately without **restriction** as opposed to the restricted share units, which are transferred according to the delayed-transfer schedule. In that Example, the noncompete provision is not deemed to be an in-substance service condition. In making a determination about whether a noncompete provision may represent an in-substance service condition, the provision's legal enforceability, the entity's intent to enforce the provision and its past practice of enforcement, the employee's rights to the instruments such as the right to sell them, the severity of the provision, the fair value of the award, and the existence or absence of an explicit employee service condition are all factors that shall be considered. Because noncompete provisions can be structured differently, one or more of those factors (such as the entity's intent to enforce the provision) may be more important than others in making that determination. For example, if Entity K did not intend to enforce the provision, then the noncompete provision would not represent an in-substance service condition.

> > Example 12: Modifications and Settlements

718-20-55-93 The following Cases illustrate the accounting for **modifications** of the terms of an award (see paragraphs 718-20-35-3 through 35-4) and are based on Example 1, Case A (.see paragraph 718-20-55-10), in which Entity T granted its employees 900,000 share options with an exercise price of $30 on January 1, 20X5:

a. Modification of vested share options (Case A)

b. Share settlement of vested share options (Case B)

c. Modification of **nonvested share** options (Case C)

d. Cash settlement of nonvested share options (Case D).

> > > Case A: Modification of Vested Share Options

718-20-55-94 On January 1, 20X9, after the share options have vested, the market price of Entity T stock has declined to $20 per share, and Entity T decides to reduce the exercise price of the outstanding share options to $20. In effect, Entity T issues new share options with an exercise price of $20 and a contractual term equal to the remaining contractual term of the original January 1, 20X5, share options, which is 6 years, in exchange for the original vested share options. Entity T incurs additional compensation cost for the excess of the fair value of the modified share options issued over the fair value of the original share options at the date of the exchange, measured as shown in the following paragraph. A nonpublic entity using the calculated value would compare the calculated value of the original award immediately before the modification with the calculated value of the modified award unless an entity has ceased to use the calculated value, in which case it would follow the guidance in paragraph 718-20-35-3(a) through (b) (calculating the effect of the modification based on the fair value). The modified share options are immediately vested, and the additional compensation cost is recognized in the period the modification occurs.

718-20-55-95 The January 1, 20X9, fair value of the modified award is $7.14. To determine the amount of additional compensation cost arising from the modification, the fair value of the original vested share options assumed to be repurchased is computed immediately before the modification. The resulting fair value at January 1, 20X9, of the original share options is $3.67 per share option, based on their remaining contractual term of 6 years, suboptimal exercise factor of 2, $20 current share price, $30 exercise price, risk-free interest rates of 1.5 percent to 3.4 percent, expected volatility of 35 percent to 50 percent and a 1.0 percent expected dividend yield. The additional compensation cost stemming from the modification is $3.47 per share option, determined as follows.

Fair value of modified share option at January 1, 20X9	$7.14
Less: Fair value of original share option at January 1, 20X9	3.67
Additional compensation cost to be recognized	$3.47

718-20-55-96 Compensation cost already recognized during the vesting period of the original award is $10,981,157 for 747,526 vested share options (see paragraphs 718-20-55-14 through 55-17). For simplicity, it is assumed that no share options were exercised before the modification. Previously recognized compensation cost is not adjusted. Additional compensation cost of $2,593,915 (747,526 vested share options × $3.47) is recognized on January 1, 20X9, because the modified share options are fully vested; any income tax effects from the additional compensation cost are recognized accordingly.

> > > Case B: Share Settlement of Vested Share Options

718-20-55-97 Rather than modify the option terms, Entity T offers to settle the original January 1, 20X5, share options for fully vested equity shares at January 1, 20X9. The fair value of each share option is estimated the same way as shown in Case A, resulting in a fair value of $3.67 per share option. Entity T recognizes the settlement as the repurchase of an outstanding equity instrument, and no additional compensation cost is recognized at the date of settlement unless the payment in fully vested equity shares exceeds $3.67 per share option. Previously recognized compensation cost for the fair value of the original share options is not adjusted.

> > > Case C: Modification of Nonvested Share Options

718-20-55-98 On January 1, 20X6, 1 year into the 3-year vesting period, the market price of Entity T stock has declined to $20 per share, and Entity T decides to reduce the exercise price of the share options to $20. The three-year cliff-vesting requirement is not changed. In effect, in exchange for the original nonvested share options, Entity T grants new share options with an exercise price of $20 and a contractual term equal to the 9-year remaining contractual term of the original share options granted on January 1, 20X5. Entity T incurs additional compensation cost for the excess of the fair value of the modified share options issued over the fair value of the original share options at the date of the exchange determined in the manner described in paragraphs 718-20-55-95 through 55-96. Entity T adds that additional compensation cost to the remaining unrecognized compensation cost for the original share options at the date of modification and recognizes the total amount ratably over the remaining two years of the three-year vesting period. Because the original vesting provision is not changed, the modification has an explicit service period of two years, which represents the requisite service period as well. Thus, incremental compensation cost resulting from the modification would be recognized ratably over the remaining two years rather than in some other pattern.

718-20-55-99 The January 1, 20X6, fair value of the modified award is $8.59 per share option, based on its contractual term of 9 years, suboptimal exercise factor of 2, $20 current share price, $20 exercise price, risk-free interest rates of 1.5 percent to 4.0 percent, expected volatilities of 35 percent to 55 percent, and a 1.0 percent expected dividend yield. The fair value of the original award immediately before the modification is $5.36 per share option, based on its remaining contractual term of 9 years, suboptimal exercise factor of 2, $20 current share price, $30 exercise price, risk-free interest rates of 1.5 percent to 4.0 percent, expected volatilities of 35 percent to 55 percent, and a 1.0 percent expected dividend yield. Thus, the additional compensation cost stemming from the modification is $3.23 per share option, determined as follows.

Fair value of modified share option at January 1, 20X6	$8.59
Less: Fair value of original share option at January 1, 20X6	5.36
Incremental value of modified share option at January 1, 20X6	$3.23

718-20-55-100 On January 1, 20X6, the remaining balance of unrecognized compensation cost for the original share options is $9.79 per share option. Using a value of $14.69 for the original option as noted in paragraph 718-20-55-9 results in recognition of $4.90 ($14.69 ÷ 3) per year. The unrecognized balance at January 1, 20X6, is $9.79 ($14.69 – $4.90) per option. The total compensation cost for each modified share option that is expected to vest is $13.02, determined as follows.

Incremental value of modified share option	$ 3.23
Unrecognized compensation cost for original share option	9.79
Total compensation cost to be recognized	$ 13.02

718-20-55-101 That amount is recognized during 20X6 and 20X7, the two remaining years of the requisite service period.

> > > Case D: Cash Settlement of Nonvested Share Options

718-20-55-102 Rather than modify the share option terms, Entity T offers on January 1, 20X6, to settle the original January 1, 20X5, grant of share options for cash. Because the share price decreased from $30 at the grant date to $20 at the date of settlement, the fair value of each share option is $5.36, the same as in Case C. If Entity T pays $5.36 per share option, it would recognize that cash settlement as the repurchase of an outstanding equity instrument and no incremental compensation cost would be recognized. However, the cash settlement of the share options effectively vests them. Therefore, the remaining unrecognized compensation cost of $9.79 per share option would be recognized at the date of settlement.

> > Example 13: Modifications Due to an Equity Restructuring

718-20-55-103 As a reminder, exchanges of share options or other equity instruments or changes to their terms in conjunction with an equity restructuring are considered modifications for purposes of this Topic. The following Cases illustrate the guidance in paragraph 718-20-35-6:

a. Original award contains antidilution provisions (Case A).

b. Original award does not contain antidilution provisions (Case B).

c. Original award does not contain an antidilution provision but is modified on the date of equity restructuring (Case C).

> > > Case A: Original Award Contains Antidilution Provisions

718-20-55-104 In this Case, assume an award contains antidilution provisions. On May 1 there is an announcement of a future equity restructuring. On October 12 the equity restructuring occurs and the terms of the award are modified in accordance with the antidilution provisions. In this Case, the modification occurs on October 12 when the terms of the award are changed. The fair value of the award is compared pre- and postmodification on October 12. The calculation of fair value is necessary to determine if there is any incremental value transferred as a result of the modification, and if so, that incremental value would be recognized as additional compensation cost. If there is no incremental fair value, no additional compensation cost would be recognized.

> > > Case B: Original Award Does Not Contain Antidilution Provisions

718-20-55-105 In this Case, the original award does not contain antidilution provisions. On May 1 there is an announcement of a future equity restructuring. On July 26 the terms of an award are modified to add antidilution provisions in contemplation of an equity restructuring. On September 30 the equity restructuring occurs. In this Case, there are two modifications to account for. The first modification occurs on July 26, when the terms of the award are changed to add antidilution provisions. Because the modification to add antidilution provisions on July 26 is done in contemplation of an equity restructuring, there must be a comparison of the fair value of the award pre- and postmodification on July 26. The premodification fair value is based on the award without antidilution provisions taking into account the effect of the contemplated restructuring on its value. The postmodification fair value is based on an award with antidilution provisions, taking into account the effect of the contemplated restructuring on its value. Any incremental value transferred would be recognized as additional compensation cost. Once the equity restructuring occurs, there is a second modification event on September 30 when the terms of the award are changed in accordance with the antidilution provisions. A second comparison of pre- and postmodification fair values is then required to determine whether any incremental value is transferred as a result of the modification. Changes to the terms of an award in accordance with its antidilution provisions generally would not result in additional compensation cost if the antidilution provisions were properly structured. The incremental value transferred, if any, would be recognized as additional compensation cost.

> > > Case C: Original Award Does Not Contain an Antidilution Provision but Is Modified on the Date of Equity Restructuring

718-20-55-106 Assume the same facts as in Case B except the terms of the awards are modified on the date of the equity restructuring, September 30. In contrast to Case B in which there are two separate modifications, there is one modification that occurs on September 30 and the fair value is compared pre- and postmodification to determine whether any incremental value is transferred as a result of the modification. Any incremental value transferred would be recognized as additional compensation cost.

> > Example 14: Modifications of Awards with Performance and Service Vesting Conditions

718-20-55-107 Paragraphs 718-10-55-60 through 55-63 note that awards may vest based on service conditions, performance conditions, or a combination of the two. Modifications of market conditions that affect exercisability or the ability to retain the award are not addressed by this Example. A modification of vesting conditions is accounted for based on the principles in paragraph 718-20-35-3; that is, total recognized compensation cost for an equity award that is modified shall at least equal the fair value of the award at the grant date unless, at the date of the modification, the performance or service conditions of the original award are not expected to be satisfied. If awards are expected to vest under the original vesting conditions at the date of the modification, an entity shall recognize compensation cost if either of the following criteria is met:

a. The awards ultimately vest under the modified vesting conditions

b. The awards ultimately would have vested under the original vesting conditions.

718-20-55-108 In contrast, if at the date of modification awards are not expected to vest under the original vesting conditions, an entity shall recognize compensation cost only if the awards vest under the modified vesting conditions. Said differently, if the entity believes that the original performance or service vesting condition is not probable of achievement at the date of the modification, the cumulative compensation cost related to the modified award, assuming vesting occurs under the modified performance or service vesting condition, is the modified award's fair value at the date of the modification. The following Cases illustrate the application of those requirements:

a. Type I probable to probable modification (Case A)

b. Type II probable to improbable modification (Case B)

c. Type III improbable to probable modification (Case C)

d. Type IV improbable to improbable modification (Case D).

718-20-55-109 Cases A through D are all based on the same scenario: Entity T grants 1,000 share options to each of 10 employees in the sales department. The share options have the same terms and conditions as those described in Example 1 (see paragraph 718-20-55-4), except that the share options specify that vesting is conditional upon selling 150,000 units of product A (the original sales target) over the 3-year explicit service period. The grant-date fair value of each option is $14.69 (see paragraph 718-20-55-9). For simplicity, this Example assumes that no forfeitures will occur from employee termination; forfeitures will only occur if the sales target is not achieved. Example 15 (see paragraph 718-20-55-120) provides an additional illustration of a Type III modification.

718-20-55-110 Cases A through D assume that the options are out-of-the-money when modified; however, that fact is not determinative in the illustrations (that is, options could be in- or out-of-the-money).

> > > Case A: Type I Probable to Probable Modification

718-20-55-111 Based on historical sales patterns and expectations related to the future, management of Entity T believes at the grant date that it is probable that the sales target will be achieved. On January 1, 20X7, 102,000 units of Product A have been sold. During December 20X6, one of Entity T's competitors declared bankruptcy after a fire destroyed a factory and warehouse containing the competitor's inventory. To push the salespeople to take advantage of that situation, the award is modified on January 1, 20X7, to raise the sales target to 154,000 units of Product A (the modified sales target). Notwithstanding the nature of the modification's probability of occurrence, the objective of this Case is to demonstrate the accounting for a Type I modification. Additionally, as of January 1, 20X7, the options are out-of-the-money because of a general stock market decline. No other terms or conditions of the original award are modified, and management of Entity T continues to believe that it is probable that the modified sales target will be achieved. Immediately before the modification, total compensation cost expected to be recognized over the 3-year vesting period is $146,900 or $14.69 multiplied by the number of share options expected to vest (10,000). Because no other terms or conditions of the award were modified, the modification does not affect the per-share-option fair value (assumed to be $8 in this Case at the date of the modification). Moreover, because the modification does not affect the number of share options expected to vest, no incremental compensation cost is associated with the modification.

718-20-55-112 This paragraph illustrates the cumulative compensation cost Entity T should recognize for the modified award based on three potential outcomes:

a. Outcome 1—achievement of the modified sales target. In Outcome 1, all 10,000 share options vest because the salespeople sold at least 154,000 units of Product A. In that outcome, Entity T would recognize cumulative compensation cost of $146,900.

b. Outcome 2—achievement of the original sales target. In Outcome 2, no share options vest because the salespeople sold more than 150,000 units of Product A but less than 154,000 units (the modified sales target is not achieved). In that outcome, Entity T would recognize cumulative compensation cost of $146,900 because the share options would have vested under the original terms and conditions of the award.

c. Outcome 3—failure to achieve either sales target. In Outcome 3, no share options vest because the modified sales target is not achieved; additionally, no share options would have vested under the original terms and conditions of the award. In that case, Entity T would recognize cumulative compensation cost of $0.

> > > Case B: Type II Probable to Improbable Modification

718-20-55-113 It is generally believed that Type II modifications will be rare; therefore, this illustration has been provided for the sake of completeness. Based on historical sales patterns and expectations related to the future, management of Entity T believes that at the grant date, it is probable that the sales target (150,000 units of product A) will be achieved. At January 1, 20X7, 102,000 units of product A have been sold and the options are out-of-the-money because of a general stock market decline. Entity T's management implements a cash bonus program based on achieving an annual sales target for 20X7. The options are neither cancelled nor settled as a result of the cash bonus program. The cash bonus program would be accounted for using the same accounting as for other cash bonus arrangements. Concurrently, the sales target for the option awards is revised to 170,000 units of Product A. No other terms or conditions of the original award are modified. Management believes that the modified sales target is not probable of achievement; however, they continue to believe that the original sales target is probable of achievement. Immediately before the modification, total compensation cost expected to be recognized over the 3-year vesting period is $146,900 or $14.69 multiplied by the number of share options expected to vest (10,000). Because no other terms or conditions of the award were modified, the modification does not affect the per-share-option fair value (assumed in this Case to be $8 at the modification date). Moreover, because the modification does not affect the number of share options expected to vest under the original vesting provisions, Entity T would determine incremental compensation cost in the following manner.

Fair value of modified share option	$ 8
Share options expected to vest under original sales target	10,000
Fair value of modified award	$80,000
Fair value of original share option	$ 8
Share options expected to vest under original sales target	10,000
Fair value of original award	$80,000
Incremental compensation cost of modification	$ -

718-20-55-114 In determining the fair value of the modified award for this type of modification, an entity shall use the greater of the options expected to vest under the modified vesting condition or the options that previously had been expected to vest under the original vesting condition.

718-20-55-115 This paragraph illustrates the cumulative compensation cost Entity T should recognize for the modified award based on three potential outcomes:

a. Outcome 1—achievement of the modified sales target. In Outcome 1, all 10,000 share options vest because the salespeople sold at least 170,000 units of Product A. In that outcome, Entity T would recognize cumulative compensation cost of $146,900.

b. Outcome 2—achievement of the original sales target. In Outcome 2, no share options vest because the salespeople sold more than 150,000 units of Product A but less than 170,000 units (the modified sales target is not achieved). In that outcome, Entity T would recognize cumulative compensation cost of $146,900 because the share options would have vested under the original terms and conditions of the award.

c. Outcome 3—failure to achieve either sales target. In Outcome 3, no share options vest because the modified sales target is not achieved; additionally, no share options would have vested under the original terms and conditions of the award. In that case, Entity T would recognize cumulative compensation cost of $0.

> > > Case C: Type III Improbable to Probable Modification

718-20-55-116 Based on historical sales patterns and expectations related to the future, management of Entity T believes at the grant date that none of the options will vest because it is not probable that the sales target will be achieved. On January 1, 20X7, 80,000 units of Product A have been sold. To further motivate the salespeople, the sales target (150,000 units of Product A) is lowered to 120,000 units of Product A (the modified sales target). No other terms or conditions of the original award are modified. Management believes that the modified sales target is probable of achievement. Immediately before the modification, total compensation cost expected to be recognized over the 3-year vesting period is $0 or $14.69 multiplied by the number of share options expected to vest (zero). Because no other terms or conditions of the award were modified, the modification does not affect the per-share-option fair value (assumed in this Case to be $8 at the modification date). Since the modification affects the number of share options expected to vest under the original vesting provisions, Entity T will determine incremental compensation cost in the following manner.

Fair value of modified share option	$ 8
Share options expected to vest under modified sales target	10,000
Fair value of modified award	$80,000
Fair value of original share option	$ 8
Share options expected to vest under original sales target	-
Fair value of original award	$ -
Incremental compensation cost of modification	$80,000

718-20-55-117 This paragraph illustrates the cumulative compensation cost Entity T should recognize for the modified award based on three potential outcomes:

a. Outcome 1—achievement of the modified sales target. In Outcome 1, all 10,000 share options vest because the salespeople sold at least 120,000 units of Product A. In that outcome, Entity T would recognize cumulative compensation cost of $80,000.

b. Outcome 2—achievement of the original sales target and the modified sales target. In Outcome 2, Entity T would recognize cumulative compensation cost of $80,000 because in a Type III modification the original vesting condition is generally not relevant (that is, the modified award generally vests at a lower threshold of service or performance).

c. Outcome 3—failure to achieve either sales target. In Outcome 3, no share options vest because the modified sales target is not achieved; in that case, Entity T would recognize cumulative compensation cost of $0.

> > > Case D: Type IV Improbable to Improbable Modification

718-20-55-118 Based on historical sales patterns and expectations related to the future, management of Entity T believes that at the grant date it is not probable that the sales target will be achieved. On January 1, 20X7, 80,000 units of Product A have been sold. To further motivate the salespeople, the sales target is lowered to 130,000 units of Product A (the modified sales target). No other terms or conditions of the original award are modified. Entity T lost a major customer for Product A in December 20X6; hence, management continues to believe that the modified sales target is not probable of achievement. Immediately before the modification, total compensation cost expected to be recognized over the 3-year vesting period is $0 or $14.69 multiplied by the number of share options expected to vest (zero). Because no other terms or conditions of the award were modified, the modification does not affect the per-share-option fair value (assumed in this Case to be $8 at the modification date). Furthermore, the modification does not affect the number of share options expected to vest; hence, there is no incremental compensation cost associated with the modification.

718-20-55-119 This paragraph illustrates the cumulative compensation cost Entity T should recognize for the modified award based on three potential outcomes:

a. Outcome 1—achievement of the modified sales target. In Outcome 1, all 10,000 share options vest because the salespeople sold at least 130,000 units of Product A. In that outcome, Entity T would recognize cumulative compensation cost of $80,000 (10,000 × $8).

b. Outcome 2—achievement of the original sales target and the modified sales target. In Outcome 2, Entity T would recognize cumulative compensation cost of $80,000 because in a Type IV modification the original vesting condition is generally not relevant (that is, the modified award generally vests at a lower threshold of service or performance).

c. Outcome 3—failure to achieve either sales target. In Outcome 3, no share options vest because the modified sales target is not achieved; in that case, Entity T would recognize cumulative compensation cost of $0.

> > Example 15: Illustration of a Type III Improbable to Probable Modification

718-20-55-120 This Example illustrates the guidance in paragraph 718-20-35-3.

718-20-55-121 On January 1, 20X7, Entity Z issues 1,000 at-the-money options with a 4-year explicit service condition to each of 50 employees that work in Plant J. On December 12, 20X7, Entity Z decides to close Plant J and notifies the 50 Plant J employees that their employment relationship will be terminated effective June 30, 20X8. On June 30, 20X8, Entity Z accelerates vesting of all options. The grant-date fair value of each option is $20 on January 1, 20X7, and $10 on June 30, 20X8, the modification date. At the date Entity Z decides to close Plant J and terminate the employees, the service condition of the original award is not expected to be satisfied because the employees cannot render the requisite service; therefore, any compensation cost recognized December 12, 20X7, for the original award would be reversed. At the date of the modification, the fair value of the original award, which is $0 ($10 × 0 options expected to vest under the original terms of the award), is subtracted from the fair value of the modified award $500,000 ($10 × 50,000 options expected to vest under the modified award). The total recognized compensation cost of $500,000 will be less than the fair value of the award at the grant date ($1 million) because at the date of the modification, the original vesting conditions were not expected to be satisfied.

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On January 1, 20X7, Entity Z issues 1,000 at-the-money options with a 4-year explicit service condition to each of 50 employees that work in Plant J. On December 12, 20X7, Entity Z decides to close Plant J and notifies the 50 Plant J employees that their employment relationship will be terminated effective June 30, 20X8. On June 30, 20X8, Entity Z accelerates vesting of all options. The grant-date fair value of each option is $20 on January 1, 20X7, and $10 on June 30, 20X8, the modification date. At the date Entity Z decides to close Plant J and terminate the employees, the service condition of the original award is not expected to be satisfied because the employees cannot render the requisite service. Because Entity Z's accounting policy is to estimate the number of forfeitures expected to occur in accordance with paragraph 718-10-35-3, any compensation cost recognized before December 12, 20X7, for the original award would be reversed. At the date of the modification, the fair value of the original award, which is $0 ($10 × 0 options expected to vest under the original terms of the award), is subtracted from the fair value of the modified award $500,000 ($10 × 50,000 options expected to vest under the modified award). The total recognized compensation cost of $500,000 will be less than the fair value of the award at the grant date ($1 million) because at the date of the modification, the original vesting conditions were not expected to be satisfied. If Entity Z's accounting policy was to account for forfeitures when they occur in accordance with paragraph 718-10-35-3, then compensation cost recognized before December 12, 20X7, would not be reversed until the award is forfeited. However, Entity Z would be required to assess at the date of the modification whether the performance or service conditions of the original award are expected to be satisfied.

> > Example 16: Modifications That Change an Award's Classification

718-20-55-122 A modification may affect the classification of an award (for example, change the award from an equity instrument to a liability instrument). If an entity modifies an award in that manner, the Compensation—Stock Compensation Topic requires that the entity account for that modification in accordance with paragraph 718-20-35-3. The following Cases illustrate modifications that change the classification of the award:

a. Equity to liability modification (share-settled share options to cash-settled share options) (Case A)

b. Equity to equity modification (share options to shares) (Case B)

c. Liability to equity modification (cash-settled to share-settled stock appreciation rights) (Case C)

d. Liability to liability modification (cash-settled to cash-settled stock appreciation rights) (Case D)

e. Equity to liability modification (share options to fixed cash payment) (Case E).

> > > Case A: Equity to Liability Modification (Share-Settled Share Options to Cash-Settled Share Options)

718-20-55-123 Entity T grants the same share options described in Example 1, Case A (see paragraph 718-20-55-10). The number of options for which the requisite service is expected to be rendered is estimated at the grant date to be 821,406 (900,000 ×.97^3). For simplicity, this Case assumes that estimated forfeitures equal actual forfeitures. Thus, as shown in the table in paragraph 718-20-55-130, the fair value of the award at January 1, 20X5, is $12,066,454 (821,406 × $14.69), and the compensation cost to be recognized during each year of the 3-year vesting period is $4,022,151 ($12,066,454 ÷ 3). The journal entries for 20X5 are the same as those in paragraph 718-20-55-12.

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Entity T grants the same share options described in Example 1, Case A (see paragraph 718-20-55-10). As in Example 1, Case A, Entity T has an accounting policy to estimate the number of forfeitures expected to occur in accordance with paragraph 718-10-35-3. The number of options for which the requisite service is expected to be rendered is estimated at the grant date to be 821,406 (900,000 ×.97^3). For simplicity, this Case assumes that estimated forfeitures equal actual forfeitures. Thus, as shown in the table in paragraph 718-20-55-130, the fair value of the award at January 1, 20X5, is $12,066,454 (821,406 × $14.69), and the compensation cost to be recognized during each year of the 3-year vesting period is $4,022,151 ($12,066,454 ÷ 3). The journal entries for 20X5 are the same as those in paragraph 718-20-55-12.

718-20-55-124 On January 1, 20X6, Entity T modifies the share options granted to allow the employee the choice of share settlement or net cash settlement; the options no longer qualify as equity because the holder can require Entity T to settle the options by delivering cash. Because the modification affects no other terms or conditions of the options, the fair value (assumed to be $7 per share option) of the modified award equals the fair value of the original award immediately before its terms are modified on the date of modification; the modification also does not change the number of share options for which the requisite service is expected to be rendered. On the modification date, Entity T recognizes a liability equal to the portion of the award attributed to past service multiplied by the modified award's fair value. To the extent that the liability equals or is less than the amount recognized in equity for the original award, the offsetting debit is a charge to equity. To the extent that the liability exceeds the amount recognized in equity for the original award, the excess is recognized as compensation cost. In this Case, at the modification date, one-third of the award is attributed to past service (one year of service rendered/three-year requisite service period). The modified award's fair value is $5,749,842 (821,406 × $7), and the liability to be recognized at the modification date is $1,916,614 ($5,749,842 ÷ 3). The related journal entry follows.

Additional paid-in capital	$ 1,916,614	
Share-based compensation liability		$1,916,614

To recognize the share-based compensation liability.

718-20-55-125 No entry would be made to the deferred tax accounts at the modification date. The amount of remaining additional paid-in capital attributable to compensation cost recognized in 20X5 is $2,105,537 ($4,022,151 − $1,916,614).

718-20-55-126 Paragraph 718-20-35-3(b) specifies that total recognized compensation cost for an equity award shall at least equal the fair value of the award at the grant date unless at the date of the modification the service or performance conditions of the original award are not expected to be satisfied. In accordance with that principle, Entity T would ultimately recognize cumulative compensation cost equal to the greater of the following:

a. The grant-date fair value of the original equity award

b. The fair value of the modified liability award when it is settled.

718-20-55-127 To the extent that the recognized fair value of the modified liability award is less than the recognized compensation cost associated with the grant-date fair value of the original equity award, changes in that liability award's fair value through its settlement do not affect the amount of compensation cost recognized. To the extent that the fair value of the modified liability award exceeds the recognized compensation cost associated with the grant-date fair value of the original equity award, changes in the liability award's fair value are recognized as compensation cost.

718-20-55-128 At December 31, 20X6, the fair value of the modified award is assumed to be $25 per share option; hence, the modified award's fair value is $20,535,150 (821,406 × $25), and the corresponding liability at that date is $13,690,100 ($20,535,150 × 2/3) because two-thirds of the requisite service period has been rendered. The increase in the fair value of the liability award is $11,773,486 ($13,690,100 − $1,916,614). Before any adjustments for 20X6, the amount of remaining additional paid-in capital attributable to compensation cost recognized in 20X5 is $2,105,537 ($4,022,151 − $1,916,614). The cumulative compensation cost at December 31, 20X6, associated with the grant-date fair value of the original equity award is $8,044,302 ($4,022,151 × 2). Entity T would record the following journal entries for 20X6.

Compensation cost	$ 9,667,949	
Additional paid-in capital	$ 2,105,537	
Share-based compensation liability		$ 11,773,486

To increase the share-based compensation liability to $13,690,100 and recognize compensation cost of $9,667,949 ($13,690,100 − $4,022,151).

Deferred tax asset	$3,383,782	
Deferred tax benefit		$ 3,383,782

To recognize the deferred tax asset for additional compensation cost ($9,667,949 ×.35 = $3,383,782).

718-20-55-129 At December 31, 20X7, the fair value is assumed to be $10 per share option; hence, the modified award's fair value is $8,214,060 (821,406 × $10), and the corresponding liability for the fully vested award at that date is $8,214,060. The decrease in the fair value of the liability award is $5,476,040 ($8,214,060 − $13,690,100). The cumulative compensation cost as of December 31, 20X7, associated with the grant-date fair value of the original equity award is $12,066,454 (see paragraph 718-20-55-123). Entity T would record the following journal entries for 20X7.

Share-based compensation liability	$ 5,476,040	
Compensation cost		$ 1,623,646
Additional paid-in capital		$ 3,852,394

To recognize a share-based compensation liability of $8,214,060, a reduction of compensation cost of $1,623,646 ($13,690,100 − $12,066,454), and additional paid-in capital of $3,852,394 ($12,066,454 − $8,214,060).

Deferred tax expense	$568,276	
Deferred tax asset		$568,276

To reduce the deferred tax asset for the reduction in compensation cost ($1,623,646 ×.35 = $568,276).

718-20-55-130 The modified liability award is as follows.

Modified Liability Award—Cliff Vesting

Year	Total Value of Award	Pretax Cost for Year	Cumulative Pretax Cost
20X5	$12,066,454 (821,406 × $14.69)	$4,022,151 ($12,066,454 ÷ 3)	$ 4,022,151
20X6	$20,535,150 (821,406 × $25.00)	$9,667,949 [($20,535,150 × ⅔) – $4,022,151]	$ 13,690,100
20X7	$12,066,454 (821,406 × $14.69)	$(1,623,646) ($12,066,454 – $13,690,100)	$ 12,066,454

718-20-55-131 For simplicity, this Case assumes that all share option holders elected to be paid in cash on the same day, that the liability award's fair value is $10 per option, and that Entity T has already recognized its income tax expense for the year without regard to the effects of the settlement of the award. In other words, current tax expense and current taxes payable were recognized based on income and deductions before consideration of additional deductions from settlement of the award.

718-20-55-132 The $8,214,060 in cash paid to the employees on the date of settlement is deductible for tax purposes. In the period of settlement, tax return deductions that are less than compensation cost recognized result in a charge to income tax expense except to the extent that there is any remaining additional paid-in capital from excess tax benefits from previous share-based payment awards available to offset that deficiency. The entity has sufficient taxable income, and the tax benefit realized is $2,874,921 ($8,214,060 ×.35). As tax return deductions are less than compensation cost recognized, the entity must write off the deferred tax assets recognized in excess of the tax benefit ultimately realized from the exercise of employee stock options. Entity T has sufficient paid-in capital available from excess tax benefits from previous share-based payment awards to offset the entire tax deficiency. (See Subtopic 718-740 for guidance on the treatment of income taxes on employee stock compensation.) Therefore, the result is a debit to additional paid-in capital. The journal entries to reflect settlement of the share options are as follows.

Share-based compensation liability	$ 8,214,060	
Cash ($10 × 821,406)		$ 8,214,060

To recognize the cash paid to settle share options.

Deferred tax expense	$4,223,259	
Deferred tax asset		$4,223,259

To write off deferred tax asset related to compensation cost ($12,066,454 ×.35 = $4,223,259).

Current taxes payable	$ 2,874,921	
Additional paid-in capital	$ 1,348,338	
Current tax expense		$ 4,223,259

To adjust current tax expense and current taxes payable for the tax benefit from deductible compensation cost upon settlement of share options.

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The $8,214,060 in cash paid to the employees on the date of settlement is deductible for tax purposes. In the period of settlement, tax return deductions that are less than compensation cost recognized result in a charge to income tax expense. The tax benefit is $2,874,921 ($8,214,060 ×.35). Because tax return deductions are less than compensation cost recognized, the entity must write off the deferred tax assets recognized in excess of the tax benefit from the exercise of employee stock options to income tax expense in the income statement. The journal entries to reflect settlement of the share options are as follows.

Share-based compensation liability	$ 8,214,060	
Cash ($10 × 821,406)		$ 8,214,060

To recognize the cash paid to settle share options.

Deferred tax expense	$4,223,259	
Deferred tax asset		$4,223,259

To write off deferred tax asset related to compensation cost ($12,066,454 ×.35 = $4,223,259).

Current taxes payable	$ 2,874,921	
Current tax expense		$ 2,874,921

To adjust current tax expense and current taxes payable for the tax benefit from deductible compensation cost upon settlement of share options.

718-20-55-133 If instead of requesting cash, employees had held their share options and those options had expired worthless, the share-based compensation liability account would have been eliminated over time with a corresponding increase to additional paid-in capital. Previously recognized compensation cost would not be reversed. Similar to the adjustment for the actual tax deduction realized described in the preceding paragraph, all of the deferred tax asset of $4,223,259 would be charged to income tax expense except to the extent that there was any remaining paid-in capital available from excess tax benefits from previous share-based payment awards available to offset that deficiency when the share options expired.

Pending Content:

Transition Date: *(P) December 16, 2016; (N) December 16, 2017* | **Transition Guidance: 718-10-65-4**

If instead of requesting cash, employees had held their share options and those options had expired worthless, the share-based compensation liability account would have been eliminated over time with a corresponding increase to additional paid-in capital. Previously recognized compensation cost would not be reversed. Similar to the adjustment for the actual tax deduction described in paragraph 718-20-55-132, all of the deferred tax asset of $4,223,259 would be charged to income tax expense when the share options expire.

> > > Case B: Equity to Equity Modification (Share Options to Shares)

718-20-55-134 Equity to equity modifications also are addressed in Examples 12 (see paragraph 718-20-55-93) and 14 (see paragraph 718-20-55-107). This Case is based on Example 1, Case A (see paragraph 718-20-55-10), in which Entity T granted its employees 900,000 options with an exercise price of $30 on January 1, 20X5. At January 1, 20X9, after 747,526 share options have vested, the market price of Entity T stock has declined to $8 per share, and Entity T offers to exchange 4 options with an assumed per-share-option fair value of $2 at the date of exchange for 1 share of nonvested stock, with a market price of $8 per share. The nonvested stock will cliff vest after two years of service. All option holders elect to participate, and at the date of exchange, Entity T grants 186,881 (747,526 ÷ 4) nonvested shares of stock. Because the fair value of the nonvested stock is equal to the fair value of the options, there is no incremental compensation cost. Entity T will not make any additional accounting entries for the shares regardless of whether they vest, other than possibly reclassifying amounts in equity; however, Entity T will need to account for the ultimate income tax effects related to the share-based compensation arrangement.

> > > Case C: Liability to Equity Modification (Cash-Settled to Share-Settled Stock Appreciation Rights)

718-20-55-135 This Case is based on the facts given in Example 1 (see paragraph 718-30-55-1). Entity T grants cash-settled stock appreciation rights to its employees. The fair value of the award on January 1, 20X5, is $12,066,454 (821,406 × $14.69) (see paragraph 718-30-55-2).

718-20-55-136 On December 31, 20X5, the assumed fair value is $10 per stock appreciation right; hence, the fair value of the award at that date is $8,214,060 (821,406 × $10). The share-based compensation liability at December 31, 20X5, is $2,738,020 ($8,214,060 ÷ 3), which reflects the portion of the award related to the requisite service provided in 20X5 (1 year of the 3-year requisite service period). For convenience, this Case assumes that journal entries to account for the award are performed at year-end. The journal entries for 20X5 are as follows.

Compensation cost	$ 2,738,020	
Share-based compensation liability		$ 2,738,020

To recognize compensation cost.

Deferred tax asset	$958,307	
Deferred tax benefit		$958,307

To recognize the deferred tax asset for the temporary difference related to compensation cost ($2,738,020 ×.35 = $958,307).

718-20-55-137 On January 1, 20X6, Entity T modifies the stock appreciation rights by replacing the cash-settlement feature with a net share settlement feature, which converts the award from a liability award to an equity award because Entity T no longer has an obligation to transfer cash to settle the arrangement. Entity T would compare the fair value of the instrument immediately before the modification to the fair value of the modified award and recognize any incremental compensation cost. Because the modification affects no other terms or conditions, the fair value, assumed to be $10 per stock appreciation right, is unchanged by the modification and, therefore, no incremental compensation cost is recognized. The modified award's total fair value is $8,214,060. The modified award would be accounted for as an equity award from the date of modification with a fair value of $10 per share. Therefore, at the modification date, the entity would reclassify the liability of $2,738,020 recognized on December 31, 20X5, as additional paid-in capital. The related journal entry is as follows.

Share-based compensation liability	$ 2,738,020	
Additional paid-in capital		$2,738,020

To reclassify the award as equity.

718-20-55-138 Entity T will account for the modified awards as equity going forward following the pattern given in Example 1, Case A (see paragraph 718-20-55-1), recognizing $2,738,020 of compensation cost in each of 20X6 and 20X7, for a cumulative total of $8,214,060.

> > > Case D: Liability to Liability Modification (Cash-Settled to Cash-Settled Stock Appreciation Rights)

718-20-55-139 This Case is based on the facts given in Example 1 (see paragraph 718-30-55-1). Entity T grants stock appreciation rights to its employees. The fair value of the award on January 1, 20X5, is $12,066,454 (821,406 × $14.69).

718-20-55-140 On December 31, 20X5, the fair value of each stock appreciation right is assumed to be $5; therefore, the fair value of the award is $4,107,030 (821,406 × $5). The share-based compensation liability at December 31, 20X5, is $1,369,010 ($4,107,030 ÷ 3), which reflects the portion of the award related to the requisite service provided in 20X5 (1 year of the 3-year requisite service period). For convenience, this Case assumes that journal entries to account for the award are performed at year-end. The journal entries to recognize compensation cost for 20X5 are as follows.

Compensation cost	$ 1,369,010	
Share-based compensation liability		$ 1,369,010

To recognize compensation cost.

Deferred tax asset	$ 479,154	
Deferred tax benefit		$ 479,154

To recognize the deferred tax asset for the temporary difference related to compensation cost ($1,369,010 ×.35 = $479,154).

718-20-55-141 On January 1, 20X6, Entity T reprices the stock appreciation rights, giving each holder the right to receive an amount in cash equal to the increase in value of 1 share of Entity T stock over $10. The modification affects no other terms or conditions of the stock appreciation rights and does not change the number of stock appreciation rights expected to vest. The fair value of each stock appreciation right based on its modified terms is $12. The incremental compensation cost is calculated per the method in Example 12 (see paragraph 718-20-55-93).

Fair value of modified stock appreciation right award (821,406 × $12)	$9,856,872
Less: Fair value of original stock appreciation right (821,406 × $5)	4,107,030
Incremental value of modified stock appreciation right	5,749,842
Divide by three to reflect earned portion of the award	÷ 3
Compensation cost to be recognized	$1,916,614

718-20-55-142 Entity T also could determine the incremental value of the modified stock appreciation right award by multiplying the fair value of the modified stock appreciation right award by the portion of the award that is earned and subtracting the cumulative recognized compensation cost [($9,856,872 ÷ 3) − $1,369,010 = $1,916,614]. As a result, Entity T would record the following journal entries at the date of the modification.

Compensation cost	$ 1,916,614	
Share-based compensation liability		$ 1,916,614

To recognize incremental compensation cost.

Deferred tax asset	$670,815	
Deferred tax benefit		$670,815

To recognize the deferred tax asset for the temporary difference related to additional compensation cost ($1,916,614 ×.35 = $670,815).

718-20-55-143 Entity T would continue to remeasure the liability award at each reporting date until the award's settlement.

> > > Case E: Equity to Liability Modification (Share Options to Fixed Cash Payment)

718-20-55-144 Entity T grants the same share options described in Example 1, Case A (see paragraph 718-20-55-10) and records similar journal entries for 20X5 (see paragraphs 718-20-55-12 through 55-16). By January 1, 20X6, Entity T's share price has fallen, and the fair value per share option is assumed to be $2 at that date. Entity T provides its employees with an election to convert each share option into an award of a fixed amount of cash equal to the fair value of each share option on the election date ($2) accrued over the remaining requisite service period, payable upon vesting. The election does not affect vesting; that is, employees must satisfy the original service condition to vest in the award for a fixed amount of cash. This transaction is considered a modification because Entity T continues to have an obligation to its employees that is conditional upon the receipt of future employee services. There is no incremental compensation cost because the fair value of the modified award is the same as that of the original award. At the date of the modification, a liability of $547,604 [(821,406 × $2) × (1 year of requisite service rendered ÷ 3-year requisite service period)], which is equal to the portion of the award attributed to past service multiplied by the modified award's fair value, is recognized by reclassifying that amount from additional paid-in capital. The total liability of $1,642,812 (821,406 × $2) should be fully accrued by the end of the requisite service period. Because the possible tax deduction of the modified award is capped at $1,642,812, Entity T also must adjust its deferred tax asset at the date of the modification to the amount that corresponds to the recognized liability of $547,604. That amount is $191,661 ($547,604 ×.35), and the write-off of the deferred tax asset is $1,216,092 ($1,407,753 – $191,661). That write-off would be recognized in the income statement except to the extent that there is any remaining additional paid-in capital from excess tax benefits from previous share-based payment awards available to offset that deficiency. Compensation cost of $4,022,151 and a corresponding increase in additional paid-in capital would be recognized in each of 20X6 and 20X7 for a cumulative total of $12,066,454 (as calculated in Case A); however, that compensation cost has no associated income tax effect (additional deferred tax assets are recognized based only on subsequent increases in the amount of the liability).

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Entity T grants the same share options described in Example 1, Case A (see paragraph 718-20-55-10) and records similar journal entries for 20X5 (see paragraphs 718-20-55-12 through 55-16). By January 1, 20X6, Entity T's share price has fallen, and the fair value per share option is assumed to be $2 at that date. Entity T provides its employees with an election to convert each share option into an award of a fixed amount of cash equal to the fair value of each share option on the election date ($2) accrued over the remaining requisite service period, payable upon vesting. The election does not affect vesting; that is, employees must satisfy the original service condition to vest in the award for a fixed amount of cash. This transaction is considered a modification because Entity T continues to have an obligation to its employees that is conditional upon the receipt of future employee services. There is no incremental compensation cost because the fair value of the modified award is the same as that of the original award. At the date of the modification, a liability of $547,604 [(821,406 × $2) × (1 year of requisite service rendered ÷ 3-year requisite service period)], which is equal to the portion of the award attributed to past service multiplied by the modified award's fair value, is recognized by reclassifying that amount from additional paid-in capital. The total liability of $1,642,812 (821,406 × $2) should be fully accrued by the end of the requisite service period. Because the possible tax deduction of the modified award is capped at $1,642,812, Entity T also must adjust its deferred tax asset at the date of the modification to the amount that corresponds to the recognized liability of $547,604. That amount is $191,661 ($547,604 ×.35), and the write-off of the deferred tax asset is $1,216,092 ($1,407,753 – $191,661). That write-off would be recognized as income tax expense in the income statement. Compensation cost of $4,022,151 would be recognized in each of 20X6 and 20X7 for a cumulative total of $12,066,454 (as calculated in Case A); of this, $547,604 would be recognized as an increase to the liability balance, with the remaining $3,474,547 recognized as an increase in additional paid-in capital. A deferred tax benefit would be recognized in the income statement, and a corresponding increase to the deferred tax asset would be recognized for the tax effect of the increased liability of $191,661 ($547,604 × .35). The compensation cost recognized in additional paid-in capital in this situation has no associated income tax effect (additional deferred tax assets are recognized based only on subsequent increases in the amount of the liability).

718-20-75 XBRL Elements

General Note: This section contains a list of XBRL elements that reference paragraphs in this Subtopic. For additional details regarding changes to the development version of the US GAAP Financial Reporting Taxonomy, refer to the FASB taxonomy review and comment system on the FASB web site.

Adjustments to Additional Paid in Capital, Share-based Compensation, Requisite Service Period Recognition {3217}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *AdjustmentsToAdditionalPaidInCapitalSharebasedCompensationRequisiteServicePeriodRecognitionValue*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 20 Awards Classified as Equity > 55 Implementation > General, 55-12
- 718 Compensation—Stock Compensation > 20 Awards Classified as Equity > 55 Implementation > General, 55-13

This XBRL element references the following paragraph(s)/term(s) in other Subtopic(s):

- 718 Compensation—Stock Compensation > 10 Overall > 35 Subsequent Measurement > General, 35-2
- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-1(b)

Deferred Tax Expense from Stock Options Exercised {262}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *DeferredTaxExpenseFromStockOptionsExercised*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 20 Awards Classified as Equity > 55 Implementation > General, 55-20

Excess Tax Benefit from Share-based Compensation, Financing Activities {1770}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *ExcessTaxBenefitFromShareBasedCompensationFinancingActivities*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 20 Awards Classified as Equity > 55 Implementation > General, 55-24

Excess Tax Benefit from Share-based Compensation, Operating Activities {1137}
[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *ExcessTaxBenefitFromShareBasedCompensationOperatingActivities*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 20 Awards Classified as Equity > 55 Implementation > General, 55-24

Stock Compensation Plan [Member] {622}
[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *StockCompensationPlanMember*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- Share-Based Payment Arrangements

This XBRL element references the following paragraph(s)/term(s) in other Subtopic(s):

- 718 Compensation—Stock Compensation > 10 Overall > 45 Other Presentation > General, 45-1

718 Compensation—Stock Compensation
30 Awards Classified as Liabilities

718-30-00 Status

General Note: The Status Section identifies changes to this Subtopic resulting from Accounting Standards Updates. The Section provides references to the affected Codification content and links to the related Accounting Standards Updates. Nonsubstantive changes for items such as editorial, link and similar corrections are included separately in Maintenance Updates.

General

718-30-00-1 The following table identifies the changes made to this Subtopic.

Paragraph	Action	Accounting Standards Update	Date
718-30-30-2A	Added	Accounting Standards Update No. 2016-09	03/30/2016
718-30-55-2	Amended	Accounting Standards Update No. 2016-09	03/30/2016
718-30-55-9	Amended	Accounting Standards Update No. 2016-09	03/30/2016

718-30-05 Overview and Background

General Note: The Overview and Background Section provides overview and background material for the guidance contained in the Subtopic. It does not provide the historical background or due process. It may contain certain material that users generally consider useful to understand the typical situations addressed by the standards. The Section does not summarize the accounting and reporting requirements.

General

718-30-05-1 Share-based payment **awards** to **employees** may be classified as either equity or liabilities. This Subtopic addresses instruments classified as liabilities. It is closely intertwined with Subtopic 718-10, which contains guidance applicable to instruments classified as either equity or liabilities issued in **share-based payment transactions**. It may also be necessary in some cases to refer to the guidance contained in Subtopic 718-20.

718-30-15 Scope and Scope Exceptions

General Note: The Scope and Scope Exceptions Section outlines the items (for example, the entities, transactions, instruments, or events) to which the guidance in the Subtopic does or does not apply. In some cases, the Section may contain definitional or other text to frame the scope.

General

> Overall Guidance

718-30-15-1 This Subtopic follows the same Scope and Scope Exceptions as outlined in the Overall Subtopic, see Section 718-10-15, with specific transaction qualifications noted below.

> **Transactions**

718-30-15-2 The guidance in this Subtopic applies to share-based payment **awards** with **employees** that are classified as liabilities by the employer (see paragraphs 718-10-25-6 through 25-19 for a description of what is classified as liability).

718-30-15-3 The guidance in this Subtopic does not apply to equity instruments held by an employee stock ownership plan.

718-30-20 Glossary

General Note: The Master Glossary contains all terms identified as glossary terms throughout the Codification. Clicking on any term in the Master Glossary will display where the term is used. The Master Glossary may contain identical terms with different definitions, some of which may not be appropriate for a particular Subtopic. For any particular Subtopic, users should only use the glossary terms included in the particular Subtopic Glossary Section (Section 20).

Award

The collective noun for multiple instruments with the same terms and conditions granted at the same time either to a single employee or to a group of employees. An award may specify multiple vesting dates, referred to as graded vesting, and different parts of an award may have different expected terms. References to an award also apply to a portion of an award.

Calculated Value

A measure of the value of a share option or similar instrument determined by substituting the historical volatility of an appropriate industry sector index for the expected volatility of a nonpublic entity's share price in an option-pricing model.

Employee

An individual over whom the grantor of a share-based compensation award exercises or has the right to exercise sufficient control to establish an employer-employee relationship based on common law as illustrated in case law and currently under U.S. Internal Revenue Service (IRS) Revenue Ruling 87-41. A reporting entity based in a foreign jurisdiction would determine whether an employee-employer relationship exists based on the pertinent laws of that jurisdiction. Accordingly, a grantee meets the definition of an employee if the grantor consistently represents that individual to be an employee under common law. The definition of an employee for payroll tax purposes under the U.S. Internal Revenue Code includes common law employees. Accordingly, a grantor that classifies a grantee potentially subject to U.S. payroll taxes as an employee also must represent that individual as an employee for payroll tax purposes (unless the grantee is a leased employee as described below). A grantee does not meet the definition of an employee solely because the grantor represents that individual as an employee for some, but not all, purposes. For example, a requirement or decision to classify a grantee as an employee for U.S. payroll tax purposes does not, by itself, indicate that the grantee is an employee because the grantee also must be an employee of the grantor under common law.

A leased individual is deemed to be an employee of the lessee if all of the following requirements are met:

a. The leased individual qualifies as a common law employee of the lessee, and the lessor is contractually required to remit payroll taxes on the compensation paid to the leased individual for the services provided to the lessee.

b. The lessor and lessee agree in writing to all of the following conditions related to the leased individual:

   1. The lessee has the exclusive right to grant stock compensation to the individual for the employee service to the lessee.

   2. The lessee has a right to hire, fire, and control the activities of the individual. (The lessor also may have that right.)

   3. The lessee has the exclusive right to determine the economic value of the services performed by the individual (including wages and the number of units and value of stock compensation granted).

   4. The individual has the ability to participate in the lessee's employee benefit plans, if any, on the same basis as other comparable employees of the lessee.

   5. The lessee agrees to and remits to the lessor funds sufficient to cover the complete compensation, including all payroll taxes, of the individual on or before a contractually agreed upon date or dates.

A nonemployee director does not satisfy this definition of employee. Nevertheless, nonemployee directors acting in their role as members of a board of directors are treated as employees if those directors were elected by the employer's shareholders or appointed to a board position that will be filled by shareholder election when the existing term expires. However, that requirement applies only to awards granted to nonemployee directors for their services as directors. Awards granted to those individuals for other services shall be accounted for as awards to nonemployees.

Fair Value

The amount at which an asset (or liability) could be bought (or incurred) or sold (or settled) in a current transaction between willing parties, that is, other than in a forced or liquidation sale.

Grant Date

The date at which an employer and an employee reach a mutual understanding of the key terms and conditions of a share-based payment award. The employer becomes contingently obligated on the grant date to issue equity instruments or transfer assets to an employee who renders the requisite service. Awards made under an arrangement that is subject to shareholder approval are not deemed to be granted until that approval is obtained unless approval is essentially a formality (or perfunctory), for example, if management and the members of the board of directors control enough votes to approve the arrangement. Similarly, individual awards that are subject to approval by the board of directors, management, or both are not deemed to be granted until all such approvals are obtained. The grant date for an award of equity instruments is the date that an employee begins to benefit from, or be adversely affected by, subsequent changes in the price of the employer's equity shares. Paragraph 718-10-25-5 provides guidance on determining the grant date. See Service Inception Date.

Intrinsic Value

The amount by which the fair value of the underlying stock exceeds the exercise price of an option. For example, an option with an exercise price of $20 on a stock whose current market price is $25 has an intrinsic value of $5. (A nonvested share may be described as an option on that share with an exercise price of zero. Thus, the fair value of a share is the same as the intrinsic value of such an option on that share.)

Measurement Date

The date at which the equity share price and other pertinent factors, such as expected volatility, that enter into measurement of the total recognized amount of compensation cost for an award of share-based payment are fixed.

Modification

A change in any of the terms or conditions of a share-based payment award.

Nonpublic Entity
Any entity other than one that meets any of the following criteria:

a. Has equity securities that trade in a public market either on a stock exchange (domestic or foreign) or in an over-the-counter market, including securities quoted only locally or regionally

b. Makes a filing with a regulatory agency in preparation for the sale of any class of equity securities in a public market

c. Is controlled by an entity covered by the preceding criteria.

An entity that has only debt securities trading in a public market (or that has made a filing with a regulatory agency in preparation to trade only debt securities) is a nonpublic entity.

Public Entity
An entity that meets any of the following criteria:

a. Has equity securities that trade in a public market, either on a stock exchange (domestic or foreign) or in an over-the-counter market, including securities quoted only locally or regionally

b. Makes a filing with a regulatory agency in preparation for the sale of any class of equity securities in a public market

c. Is controlled by an entity covered by the preceding criteria. That is, a subsidiary of a public entity is itself a public entity.

An entity that has only debt securities trading in a public market (or that has made a filing with a regulatory agency in preparation to trade only debt securities) is not a public entity.

Service Inception Date
The date at which the requisite service period begins. The service inception date usually is the grant date, but the service inception date may differ from the grant date (see Example 6 [see paragraph 718-10-55-107]).

Settlement of an Award
An action or event that irrevocably extinguishes the issuing entity's obligation under a share-based payment award. Transactions and events that constitute settlements include the following:

a. Exercise of a share option or lapse of an option at the end of its contractual term

b. Vesting of shares

c. Forfeiture of shares or share options due to failure to satisfy a vesting condition

d. An entity's repurchase of instruments in exchange for assets or for fully vested and transferable equity instruments.

The vesting of a share option is not a settlement because the entity remains obligated to issue shares upon exercise of the option.

Share Option
A contract that gives the holder the right, but not the obligation, either to purchase (to call) or to sell (to put) a certain number of shares at a predetermined price for a specified period of time. Most share options granted to employees under share-based compensation arrangements are call options, but some may be put options.

Share-Based Payment Arrangements
An arrangement under which either of the following conditions is met:

a. One or more suppliers of goods or services (including employees) receive awards of equity shares, equity share options, or other equity instruments.

b. The entity incurs liabilities to suppliers that meet either of the following conditions:

   1. The amounts are based, at least in part, on the price of the entity's shares or other equity instruments. (The phrase at least in part is used because an award may be indexed to both the price of the entity's shares and something other than either the price of the entity's shares or a market, performance, or service condition.)

   2. The awards require or may require settlement by issuance of the entity's shares.

The term shares includes various forms of ownership interest that may not take the legal form of securities (for example, partnership interests), as well as other interests, including those that are liabilities in substance but not in form. Equity shares refers only to shares that are accounted for as equity.

Also called share-based compensation arrangements.

Share-Based Payment Transactions
A transaction under a share-based payment arrangement, including a transaction in which an entity acquires goods or services because related parties or other holders of economic interests in that entity awards a share-based payment to an employee or other supplier of goods or services for the entity's benefit. Also called share-based compensation transactions.

Vest
To earn the rights to. A share-based payment award becomes vested at the date that the employee's right to receive or retain shares, other instruments, or cash under the award is no longer contingent on satisfaction of either a service condition or a performance condition. Market conditions are not vesting conditions.

The stated vesting provisions of an award often establish the requisite service period, and an award that has reached the end of the requisite service period is vested. However, as indicated in the definition of requisite service period, the stated vesting period may differ from the requisite service period in certain circumstances. Thus, the more precise (but cumbersome) terms would be options, shares, or awards for which the requisite service has been rendered and end of the requisite service period.

Volatility
A measure of the amount by which a financial variable such as a share price has fluctuated (historical volatility) or is expected to fluctuate (expected volatility) during a period. Volatility also may be defined as a probability-weighted measure of the dispersion of returns about the mean. The volatility of a share price is the standard deviation of the continuously compounded rates of return on the share over a specified period. That is the same as the standard deviation of the differences in the natural logarithms of the stock prices plus dividends, if any, over the period. The higher the volatility, the more the returns on the shares can be expected to vary—up or down. Volatility is typically expressed in annualized terms.

718-30-30 Initial Measurement

General Note: The Initial Measurement Section provides guidance on the criteria and amounts used to measure a particular item at the date of initial recognition.

General

> Measurement Objective and Measurement Date

> > Public Entity

718-30-30-1 At the **grant date**, the measurement objective for liabilities incurred under **share-based compensation arrangements** is the same as the measurement objective for equity instruments awarded to **employees** as described in paragraph 718-10-30-6. However, the **measurement date** for liability instruments is the date of **settlement**.

> > Nonpublic Entity

718-30-30-2 A **nonpublic entity** shall make a policy decision of whether to measure all of its liabilities incurred under share-based payment arrangements at **fair value** or to measure all such liabilities at **intrinsic value**. Consistent with the guidance in paragraph 718-10-30-20, a nonpublic entity that is not able to reasonably estimate the fair value of its equity share options and similar instruments because it is not practicable for it to estimate the expected **volatility** of its share price shall make a policy choice of whether to measure its liabilities under share-based payment arrangements at **calculated value** or at intrinsic value (see Examples 8 through 9 [paragraphs 718-20-55-71 through 55-83).

718-30-30-2A

Pending Content:

Transition Date: *(P) Not Applicable; (N) December 16, 2017* | **Transition Guidance: 718-10-65-10**

A nonpublic entity can make the accounting policy election in paragraph 718-30-30-2 to change its measurement of all liability-classified awards from fair value to intrinsic value in accordance with the transition provisions in paragraph 718-10-65-10. Those transition provisions do not require a nonpublic entity to evaluate whether the change in accounting policy is preferable under Topic 250 on accounting changes and error corrections.

718-30-35 Subsequent Measurement

General Note: The Subsequent Measurement Section provides guidance on an entity's subsequent measurement and subsequent recognition of an item. Situations that may result in subsequent changes to carrying amount include impairment, credit losses, fair value adjustments, depreciation and amortization, and so forth.

General

> Measurement

718-30-35-1 The **fair value** of liabilities incurred in **share-based payment transactions** with **employees** shall be remeasured at the end of each reporting period through **settlement**.

718-30-35-2 Changes in the fair value (or **intrinsic value** for a **nonpublic entity** that elects that method) of a liability incurred under a share-based payment arrangement that occur during the requisite service period shall be recognized as compensation cost over that period. The percentage of the fair value (or intrinsic value) that is accrued as compensation cost at the end of each period shall equal the percentage of the requisite service that has been rendered at that date. Changes in the fair value (or intrinsic value) of a liability that occur after the end of the requisite service period are compensation cost of the period in which the changes occur. Any difference between the amount for which a liability **award** is settled and its fair value at the settlement date as estimated in accordance with the provisions of this Subtopic is an adjustment of compensation cost in the period of settlement. Example 1 (see paragraph 718-30-55-1) provides an illustration of accounting for a liability award from the **grant date** through its settlement.

> > Public Entity

718-30-35-3 A **public entity** shall measure a liability award under a **share-based payment arrangement** based on the award's fair value remeasured at each reporting date until the date of settlement. Compensation cost for each period until settlement shall be based on the change (or a portion of the change, depending on the percentage of the requisite service that has been rendered at the reporting date) in the fair value of the instrument for each reporting period. Example 1 (see paragraph 718-30-55-1) provides an illustration of accounting for an instrument classified as a liability using the fair-value-based method.

> > Nonpublic Entity

718-30-35-4 Regardless of the measurement method initially selected under paragraph 718-10-30-20, a nonpublic entity shall remeasure its liabilities under share-based payment arrangements at each reporting date until the date of settlement. The fair-value-based method is preferable for purposes of justifying a change in accounting principle under Topic 250. Example 1 (see paragraph 718-30-55-1) provides an illustration of accounting for an instrument classified as a liability using the fair-value-based method. Example 2 (see paragraph 718-30-55-12) provides an illustration of accounting for an instrument classified as a liability using the intrinsic value method.

> Modification of an Award

718-30-35-5 A **modification** of a liability award is accounted for as the exchange of the original award for a new award. However, because liability awards are remeasured at their fair value (or intrinsic value for a nonpublic entity that elects that method) at each reporting date, no special guidance is necessary in accounting for a modification of a liability award that remains a liability after the modification (see Example 15, Case C [paragraph718-20-55-135] for what happens when the modification causes the award to no longer be a liability).

718-30-55 Implementation Guidance and Illustrations

General Note: The Implementation Guidance and Illustrations Section contains implementation guidance and illustrations that are an integral part of the Subtopic. The implementation guidance and illustrations do not address all possible variations. Users must consider carefully the actual facts and circumstances in relation to the requirements of the Subtopic.

General

> Illustrations

> > Example 1: Cash-Settled Stock Appreciation Right

718-30-55-1 This Example illustrates the guidance in paragraphs 718-30-35-2 through 35-4 and 718-740-25-2 through 25-4.

718-30-55-2 Entity T, a **public entity**, grants share appreciation rights with the same terms and conditions as those described in Example 1 (see paragraph 718-20-55-4). Each stock appreciation right entitles the holder to receive an amount in cash equal to the increase in value of 1 share of Entity T stock over $30. Entity T determines the grant-date **fair value** of each stock appreciation right in the same manner as a **share option** and uses the same assumptions and option-pricing model used to estimate the fair value of the share options in that Example; consequently, the grant-date fair value of each stock appreciation right is $14.69 (see paragraphs 718-20-55-7 through 55-9). The awards cliff-**vest** at the end of three years of service (an explicit and requisite service period of three years). The number of stock appreciation rights for which the requisite service is expected to be rendered is estimated at the **grant date** to be 821,406 (900,000 $\times .97^3$). Thus, the fair value of the **award** as of January 1, 20X5, is $12,066,454 (821,406 × $14.69). For simplicity, this Example assumes that estimated forfeitures equal actual forfeitures.

Pending Content:

Transition Date: *(P) December 16, 2016; (N) December 16, 2017* | **Transition Guidance: 718-10-65-6**

Entity T, a **public entity**, grants share appreciation rights with the same terms and conditions as those described in Example 1 (see paragraph 718-20-55-4). As in Example 1, Case A, Entity T makes an accounting policy election in accordance with paragraph 718-10-35-3 to estimate the number of forfeitures expected to occur and includes that estimate in its initial accrual of compensation costs. Each stock appreciation right entitles the holder to receive an amount in cash equal to the increase in value of 1 share of Entity T stock over $30. Entity T determines the grant-date **fair value** of each stock appreciation right in the same manner as a **share option** and uses the same assumptions and option-pricing model used to estimate the fair value of the share options in that Example; consequently, the grant-date fair value of each stock appreciation right is $14.69 (see paragraphs 718-20-55-7 through 55-9). The awards cliff-**vest** at the end of three years of service (an explicit and requisite service period of three years). The number of stock appreciation rights for which the requisite service is expected to be rendered is estimated at the **grant date** to be 821,406 (900,000 $\times .97^3$). Thus, the fair value of the **award** as of January 1, 20X5, is $12,066,454 (821,406 × $14.69). For simplicity, this Example assumes that estimated forfeitures equal actual forfeitures.

718-30-55-3 Paragraph 718-30-35-4 permits a **nonpublic entity** to measure share-based payment liabilities at either fair value (or, in some cases, **calculated value**) or **intrinsic value**. If a nonpublic entity elects to measure those liabilities at fair value, the accounting demonstrated in this Example would be applicable. Paragraph 718-30-35-3 requires that share-based compensation liabilities be recognized at fair value or a portion thereof (depending on the percentage of requisite service rendered at the reporting date) and be remeasured at each reporting date through the date of **settlement**; consequently, compensation cost recognized during each year of the three-year vesting period (as well as during each year thereafter through the date of settlement) will vary based on changes in the award's fair value. As of December 31, 20X5, the assumed fair value is $10 per stock appreciation right; hence, the fair value of the award is $8,214,060 (821,406 × $10). The share-based compensation liability as of December 31, 20X5, is $2,738,020 ($8,214,060 ÷ 3) to account for the portion of the award related to the service rendered in 20X5 (1 year of the 3-year requisite service period). For convenience, this Example assumes that journal entries to account for the award are performed at year-end. The journal entries for 20X5 are as follows.

Compensation cost	$ 2,738,020	
Share-based compensation liability		$ 2,738,020

To recognize compensation cost.

Deferred tax asset	$ 958,307	
Deferred tax benefit		$ 958,307

To recognize the deferred tax asset for the temporary difference related to compensation cost ($2,738,020 ×.35 = $958,307).

718-30-55-4 As of December 31, 20X6, the fair value is assumed to be $25 per stock appreciation right; hence, the award's fair value is $20,535,150 (821,406 × $25), and the corresponding liability at that date is $13,690,100 ($20,535,150 × 2/3) because service has been provided for 2 years of the 3-year requisite service period. Compensation cost recognized for the award in 20X6 is $10,952,080 ($13,690,100 – $2,738,020). Entity T recognizes the following journal entries for 20X6.

Compensation cost	$ 10,952,080	
Share-based compensation liability		$ 10,952,080

To recognize a share-based compensation liability of $13,690,100 and associated compensation cost.

Deferred tax asset	$ 3,833,228	
Deferred tax benefit		$ 3,833,228

To recognize the deferred tax asset for additional compensation cost ($10,952,080 ×.35 = $3,833,228).

718-30-55-5 As of December 31, 20X7, the fair value is assumed to be $20 per stock appreciation right; hence, the award's fair value is $16,428,120 (821,406 × $20), and the corresponding liability at that date is $16,428,120 ($16,428,120 × 1) because the award is fully vested. Compensation cost recognized for the liability award in 20X7 is $2,738,020 ($16,428,120 – $13,690,100). Entity T recognizes the following journal entries for 20X7.

Compensation cost	$ 2,738,020	
Share-based compensation liability		$ 2,738,020

To recognize a share-based compensation liability of $16,428,120 and associated compensation cost.

Deferred tax asset	$ 958,307	
Deferred tax benefit		$ 958,307

To recognize the deferred tax asset for additional compensation cost ($2,738,020 ×.35 = $958,307).

718-30-55-6 The share-based liability award is as follows.

Year	Total Value of Award at Year-End	Pretax Cost for Year	Cumulative Pretax Cost
20X5	$8,214,060 (821,406 × $10)	$2,738,020 ($8,214,060 ÷ 3)	$ 2,738,020
20X6	$20,535,150 (821,406 × $25)	$10,952,080 [($20,535,150 × ⅔) – $2,738,020]	$ 13,690,100
20X7	$16,428,120 (821,406 × $20)	$2,738,020 ($16,428,120 – $13,690,100)	$ 16,428,120

718-30-55-7 For simplicity, this Example assumes that all of the stock appreciation rights are exercised on the same day, that the liability award's fair value is $20 per stock appreciation right, and that Entity T has already recognized its income tax expense for the year without regard to the effects of the exercise of the **employee** stock appreciation rights. In other words, current tax expense and current taxes payable were recognized based on taxable income and deductions before consideration of additional deductions from exercise of the stock appreciation rights. The amount credited to cash for the exercise of the stock appreciation rights is equal to the share-based compensation liability of $16,428,120.

718-30-55-8 At exercise the journal entry is as follows.

Share-based compensation liability	$ 16,428,120	
Cash (821,406 × $20)		$ 16,428,120

To recognize the cash payment to employees from stock appreciation right exercise.

718-30-55-9 The cash paid to the employees on the date of exercise is deductible for tax purposes. Entity T has sufficient taxable income, and the tax benefit realized is $5,749,842 ($16,428,120 ×.35).

Pending Content:

Transition Date: *(P) December 16, 2016; (N) December 16, 2017* | **Transition Guidance:** **718-10-65-4**

The cash paid to the employees on the date of exercise is deductible for tax purposes. The tax benefit is $5,749,842 ($16,428,120 ×.35).

718-30-55-10 At exercise the journal entry is as follows.

Deferred tax expense	$ 5,749,842	
Deferred tax asset		$ 5,749,842

To write off the deferred tax asset related to the stock appreciation rights.

Current taxes payable	$ 5,749,842	
Current tax expense		$ 5,749,842

To adjust current tax expense and current taxes payable to recognize the current tax benefit from deductible compensation cost.

718-30-55-11 If the stock appreciation rights had expired worthless, the share-based compensation liability account and deferred tax asset account would have been adjusted to zero through the income statement as the award's fair value decreased.

> > Example 2: Award Granted by a Nonpublic Entity that Elects the Intrinsic Value Method

718-30-55-12 This Example illustrates the guidance in paragraphs 718-30-35-4 and 718-740-25-2 through 25-4.

718-30-55-13 On January 1, 20X6, Entity W, a nonpublic entity that has chosen the accounting policy of using the intrinsic value method of accounting for share-based payments that are classified as liabilities in accordance with paragraphs 718-30-30-2 and 718-30-35-4, grants 100 cash-settled stock appreciation rights with a 5-year life to each of its 100 employees. Each stock appreciation right entitles the holder to receive an amount in cash equal to the increase in value of 1 share of Entity W's stock over $7. The awards cliff-vest at the end of three years of service (an explicit and requisite service period of three years). For simplicity, the Example assumes that no forfeitures occur during the vesting period and does not reflect the accounting for income tax consequences of the awards.

718-30-55-14 Because of Entity W's accounting policy decision to use intrinsic value, all of its share-based payments that are classified as liabilities are recognized at intrinsic value (or a portion thereof, depending on the percentage of requisite service that has been rendered) at each reporting date through the date of settlement; consequently, the compensation cost recognized in each year of the three-year requisite service period will vary based on changes in the liability award's intrinsic value. As of December 31, 20X6, Entity W stock is valued at $10 per share; hence, the intrinsic value is $3 per stock appreciation right ($10 – $7), and the intrinsic value of the award is $30,000 (10,000 × $3). The compensation cost to be recognized for 20X6 is $10,000 ($30,000 ÷ 3), which corresponds to the service provided in 20X6 (1 year of the 3-year service period). For convenience, this Example assumes that journal entries to account for the award are performed at year-end. The journal entry for 20X6 is as follows.

Compensation cost	$ 10,000	
Share-based compensation liability		$ 10,000

To recognize compensation cost.

718-30-55-15 As of December 31, 20X7, Entity W stock is valued at $8 per share; hence, the intrinsic value is $1 per stock appreciation right ($8 – $7), and the intrinsic value of the award is $10,000 (10,000 × $1). The decrease in the intrinsic value of the award is $20,000 ($10,000 – $30,000). Because services for 2 years of the 3-year service period have been rendered, Entity W must recognize cumulative compensation cost for two-thirds of the intrinsic value of the award, or $6,667 ($10,000 × 2/3); however, Entity W recognized compensation cost of $10,000 in 20X5. Thus, Entity W must recognize an entry in 20X7 to reduce cumulative compensation cost to $6,667.

Share-based compensation liability	$ 3,333	
Compensation cost		$ 3,333

To adjust cumulative compensation cost ($6,667 – $10,000).

718-30-55-16 As of December 31, 20X8, Entity W stock is valued at $15 per share; hence, the intrinsic value is $8 per stock appreciation right ($15 – $7), and the intrinsic value of the award is $80,000 (10,000 × $8). The cumulative compensation cost recognized as of December 31, 20X8, is $80,000 because the award is fully vested. The journal entry for 20X8 is as follows.

Compensation cost	$73,333	
Share-based compensation liability		$73,333

To recognize compensation cost ($80,000 – $6,667).

718-30-55-17 The share-based liability award at intrinsic value is as follows.

Year	Total Value of Award at Year-End	Pretax Cost for Year	Cumulative Pretax Cost
20X6	$30,000 (10,000 × $3)	$10,000 ($30,000 ÷ 3)	$ 10,000
20X7	$10,000 (10,000 × $1)	$(3,333) [($10,000 × ⅔) – $10,000]	$ 6,667
20X8	$80,000 (10,000 × $8)	$73,333 ($80,000 – $6,667)	$ 80,000

718-30-55-18 For simplicity, this Example assumes that all of the stock appreciation rights are settled on the day that they vest, December 31, 20X8, when the share price is $15 and the intrinsic value is $8 per share. The cash paid to settle the stock appreciation rights is equal to the share-based compensation liability of $80,000.

718-30-55-19 At exercise the journal entry is as follows.

Share-based compensation liability	$ 80,000	
Cash (10,000 × $8)		$ 80,000

To recognize the cash payment to employees for settlement of stock appreciation rights.

718-30-55-20 If the stock appreciation rights had not been settled, Entity W would continue to remeasure those remaining awards at intrinsic value at each reporting date through the date they are exercised or otherwise settled.

718-30-75 XBRL Elements

General Note: This section contains a list of XBRL elements that reference paragraphs in this Subtopic. For additional details regarding changes to the development version of the US GAAP Financial Reporting Taxonomy, refer to the FASB taxonomy review and comment system on the FASB web site.

Stock Compensation Plan [Member] {622}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *StockCompensationPlanMember*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- Share-Based Payment Arrangements

This XBRL element references the following paragraph(s)/term(s) in other Subtopic(s):

- 718 Compensation—Stock Compensation > 10 Overall > 45 Other Presentation > General, 45-1

Stock Granted, Value, Share-based Compensation, Net of Forfeitures {259}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *StockGrantedDuringPeriodValueSharebasedCompensation*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 30 Awards Classified as Liabilities > 35 Subsequent Measurement > General, 35-1

This XBRL element references the following paragraph(s)/term(s) in other Subtopic(s):

- 718 Compensation—Stock Compensation > 10 Overall > 30 Initial Measurement > General, 30-3

718-30-S00 Status

General Note: The Status Section identifies changes to this Subtopic resulting from Accounting Standards Updates. The Section provides references to the affected Codification content and links to the related Accounting Standards Updates. Nonsubstantive changes for items such as editorial, link and similar corrections are included separately in Maintenance Updates.

General

718-30-S00-1 The following table identifies the changes made to this Subtopic.

Paragraph	Action	Accounting Standards Update	Date
718-30-S55-1	Amended	Accounting Standards Update No. 2009-04	08/26/2009

718-30-S55 Implementation Guidance and Illustrations

General Note: The Implementation Guidance and Illustrations Section contains implementation guidance and illustrations that are an integral part of the Subtopic. The implementation guidance and illustrations do not address all possible variations. Users must consider carefully the actual facts and circumstances in relation to the requirements of the Subtopic.

General

> Certain Redeemable Financial Instruments Issued in Conjunction with Share-Based Payment Arrangements

718-30-S55-1 See paragraph 718-10-S99-1, SAB Topic 14.E, and paragraph 480-10-S99-3A, SEC Staff Announcement: Classification and Measurement of Redeemable Securities, for SEC Staff views on awards with redemption features issued in conjunction with share-based payment arrangements.

718 Compensation—Stock Compensation
40 Employee Stock Ownership Plans

718-40-00 Status

General Note: The Status Section identifies changes to this Subtopic resulting from Accounting Standards Updates. The Section provides references to the affected Codification content and links to the related Accounting Standards Updates. Nonsubstantive changes for items such as editorial, link and similar corrections are included separately in Maintenance Updates.

General

718-40-00-1 The following table identifies the changes made to this Subtopic.

Paragraph	Action	Accounting Standards Update	Date
Fair Value (1st def.)	Superseded	Accounting Standards Update No. 2015-10	06/12/2015
Fair Value (2nd def.)	Added	Accounting Standards Update No. 2015-10	06/12/2015
Public Business Entity	Amended	Maintenance Update 2016-11	06/27/2016
718-40-25-2	Amended	Accounting Standards Update No. 2015-10	06/12/2015
718-40-25-14	Amended	Accounting Standards Update No. 2015-10	06/12/2015
718-40-30-2	Amended	Accounting Standards Update No. 2015-10	06/12/2015
718-40-30-4	Amended	Accounting Standards Update No. 2015-10	06/12/2015
718-40-30-5	Amended	Accounting Standards Update No. 2015-10	06/12/2015
718-40-40-2	Amended	Accounting Standards Update No. 2015-10	06/12/2015
718-40-45-7	Amended	Accounting Standards Update No. 2015-10	06/12/2015
718-40-50-1	Amended	Accounting Standards Update No. 2015-10	06/12/2015
718-40-55-4	Amended	Accounting Standards Update No. 2015-10	06/12/2015
718-40-55-6	Amended	Accounting Standards Update No. 2016-09	03/30/2016
718-40-55-8	Amended	Accounting Standards Update No. 2016-09	03/30/2016
718-40-60-1	Amended	Accounting Standards Update No. 2016-09	03/30/2016
718-40-65-1	Added	Accounting Standards Update No. 2015-10	06/12/2015

718-40-05 Overview and Background

General Note: The Overview and Background Section provides overview and background material for the guidance contained in the Subtopic. It does not provide the historical background or due process. It may contain certain material that users generally consider useful to understand the typical situations addressed by the standards. The Section does not summarize the accounting and reporting requirements.

General

718-40-05-1 This Subtopic provides guidance to entities that utilize **employee stock ownership plans**. It includes the following Subsections:

a. General

b. Leveraged employee stock ownership plans

c. Nonleveraged employee stock ownership plans.

718-40-05-2 Employee stock ownership plans are used for many purposes in addition to furthering employee ownership. These include the following:

a. To fund a matching program for a sponsor's 401(k) saving plan, formula-based profit-sharing plan, and other employee benefits

b. To raise new capital or to create a marketplace for the existing stock

c. To replace lost benefits from the termination of other retirement plans or provide benefits under postretirement benefit plans, particularly medical benefits

d. To be part of the financing package in leveraged buy-outs

e. To provide a tax-advantaged means for owners to terminate their ownership

f. To be part of a long-term program to restructure the equity section of a plan sponsor's balance sheet

g. To defend the entity against hostile takeovers.

Leveraged Employee Stock Ownership Plans

718-40-05-3 A leveraged **employee stock ownership plan** borrows money to acquire shares of the employer stock. The money can be borrowed by the employee stock ownership plan from the sponsor, with or without a related outside loan, or directly from an outside lender. Outside loans to the employee stock ownership plan are generally guaranteed by the sponsor. Unlike other kinds of employee benefit plans, an employee stock ownership plan is permitted by Employee Retirement Income Security Act of 1974 to borrow from a related party or with the assistance of a related party. The debt usually is collateralized by the employer's shares.

Nonleveraged Employee Stock Ownership Plans

718-40-05-4 As indicated in paragraph 718-40-25-21, an employer with a nonleveraged **employee stock ownership plan** periodically contributes its shares or cash to its employee stock ownership plan on behalf of employees. In the case of cash contributions the entity acquires shares. The shares are allocated to participant accounts and held by the employee stock ownership plan until distributed to the employees at a future date, such as on the date of termination or retirement. The shares of employer stock obtained by the nonleveraged employee stock ownership plan shall be allocated to individual participant accounts as of the end of the employee stock ownership plan's fiscal year. Allocating shares by year end is mandated by the tax code in 2008. The Codification does not keep up with changes in the tax code.

718-40-15 Scope and Scope Exceptions

General Note: The Scope and Scope Exceptions Section outlines the items (for example, the entities, transactions, instruments, or events) to which the guidance in the Subtopic does or does not apply. In some cases, the Section may contain definitional or other text to frame the scope.

General

> Overall Guidance

718-40-15-1 This Subtopic follows the same Scope and Scope Exceptions as outlined in the Overall Subtopic, see Section 718-10-15, with specific qualifications noted below.

> Entities

718-40-15-2 The guidance in this Subtopic applies to all employers with **employee stock ownership plans**, both leveraged and nonleveraged.

> Transactions

718-40-15-3 This Subtopic provides guidance on an employer's accounting for employee stock ownership plans. There are two basic forms of employee stock ownership plan: leveraged and nonleveraged. This Subtopic addresses the financial reporting for each separately.

> Other Considerations

718-40-15-4 The guidance in this Subtopic does not address the following:

a. Financial reporting by employee stock ownership plans.

Leveraged Employee Stock Ownership Plans

> **Overall Guidance**

718-40-15-5 The Leveraged Employee Stock Ownership Plans Subsections follow the same Scope and Scope Exceptions as outlined in the General Subsection of this Subtopic, see paragraph 718-40-15-1.

Nonleveraged Employee Stock Ownership Plans

> **Overall Guidance**

718-40-15-6 The Nonleveraged Employee Stock Ownership Plans Subsections follow the same Scope and Scope Exceptions as outlined in the General Subsection of this Subtopic, see paragraph 718-40-15-1.

718-40-20 Glossary

General Note: The Master Glossary contains all terms identified as glossary terms throughout the Codification. Clicking on any term in the Master Glossary will display where the term is used. The Master Glossary may contain identical terms with different definitions, some of which may not be appropriate for a particular Subtopic. For any particular Subtopic, users should only use the glossary terms included in the particular Subtopic Glossary Section (Section 20).

Allocated Shares

Allocated shares are shares in an employee stock ownership plan trust that have been assigned to individual participant accounts based on a known formula. Internal Revenue Service (IRS) rules require allocations to be nondiscriminatory generally based on compensation, length of service, or a combination of both. For any particular participant such shares may be vested, unvested, or partially vested.

Committed-to-Be-Released Shares

Committed-to-be-released shares are shares that, although not legally released, will be released by a future scheduled and committed debt service payment and will be allocated to employees for service rendered in the current accounting period. The period of employee service to which shares relate is generally defined in the employee stock ownership plan documents. Shares are legally released from suspense and from serving as collateral for employee stock ownership plan debt as a result of payment of debt service. Those shares are required to be allocated to participant accounts as of the end of the employee stock ownership plan's fiscal year. Formulas used to determine the number of shares released can be based on either of the following:

a. The ratio of the current principal amount to the total original principal amount (in which case unearned employee stock ownership plan shares and debt balance will move in tandem)

b. The ratio of the current principal plus interest amount to the total original principal plus interest to be paid.

Shares are released more rapidly under the second method than under the first. Tax law permits the first method only if the employee stock ownership plan debt meets certain criteria.

Direct Loan

A direct loan is a loan made by a lender other than the employer to the employee stock ownership plan. Such loans often include some formal guarantee or commitment by the employer.

Employee

An individual over whom the grantor of a share-based compensation award exercises or has the right to exercise sufficient control to establish an employer-employee relationship based on common law as illustrated in case law and currently under U.S. Internal Revenue Service (IRS) Revenue Ruling 87-41. A reporting entity based in a foreign jurisdiction would determine whether an employee-employer relationship exists based on the pertinent laws of that jurisdiction. Accordingly, a grantee meets the definition of an employee if the grantor consistently represents that individual to be an employee under common law. The definition of an employee for payroll tax purposes under the U.S. Internal Revenue Code includes common law employees. Accordingly, a grantor that classifies a grantee potentially subject to U.S. payroll taxes as an employee also must represent that individual as an employee for payroll tax purposes (unless the grantee is a leased employee as described below). A grantee does not meet the definition of an employee solely because the grantor represents that individual as an employee for some, but not all, purposes. For example, a requirement or decision to classify a grantee as an employee for U.S. payroll tax purposes does not, by itself, indicate that the grantee is an employee because the grantee also must be an employee of the grantor under common law.

A leased individual is deemed to be an employee of the lessee if all of the following requirements are met:

a. The leased individual qualifies as a common law employee of the lessee, and the lessor is contractually required to remit payroll taxes on the compensation paid to the leased individual for the services provided to the lessee.

b. The lessor and lessee agree in writing to all of the following conditions related to the leased individual:

1. The lessee has the exclusive right to grant stock compensation to the individual for the employee service to the lessee.

2. The lessee has a right to hire, fire, and control the activities of the individual. (The lessor also may have that right.)

3. The lessee has the exclusive right to determine the economic value of the services performed by the individual (including wages and the number of units and value of stock compensation granted).

4. The individual has the ability to participate in the lessee's employee benefit plans, if any, on the same basis as other comparable employees of the lessee.

5. The lessee agrees to and remits to the lessor funds sufficient to cover the complete compensation, including all payroll taxes, of the individual on or before a contractually agreed upon date or dates.

A nonemployee director does not satisfy this definition of employee. Nevertheless, nonemployee directors acting in their role as members of a board of directors are treated as employees if those directors were elected by the employer's shareholders or appointed to a board position that will be filled by shareholder election when the existing term expires. However, that requirement applies only to awards granted to nonemployee directors for their services as directors. Awards granted to those individuals for other services shall be accounted for as awards to nonemployees.

Employee Stock Ownership Plan

An employee stock ownership plan is an employee benefit plan that is described by the Employee Retirement Income Security Act of 1974 and the Internal Revenue Code of 1986 as a stock bonus plan, or combination stock bonus and money purchase pension plan, designed to invest primarily in employer stock. Also called an employee share ownership plan.

Employer Loan

An employer loan is a loan made by the employer to the employee stock ownership plan, with no related outside loan.

Fair Value

The price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date.

Fair Value

The amount at which an asset (or liability) could be bought (or incurred) or sold (or settled) in a current transaction between willing parties, that is, other than in a forced or liquidation sale.

Financial Statements Are Available to Be Issued

Financial statements are considered available to be issued when they are complete in a form and format that complies with GAAP and all approvals necessary for issuance have been obtained, for example, from management, the board of directors, and/or significant shareholders. The process involved in creating and distributing the financial statements will vary depending on an entity's management and corporate governance structure as well as statutory and regulatory requirements.

Indirect Loan

An indirect loan is a loan made by the employer to the employee stock ownership plan, with a related outside loan to the employer.

Market Participants

Buyers and sellers in the principal (or most advantageous) market for the asset or liability that have all of the following characteristics:

a. They are independent of each other, that is, they are not related parties, although the price in a related-party transaction may be used as an input to a fair value measurement if the reporting entity has evidence that the transaction was entered into at market terms

b. They are knowledgeable, having a reasonable understanding about the asset or liability and the transaction using all available information, including information that might be obtained through due diligence efforts that are usual and customary

c. They are able to enter into a transaction for the asset or liability

d. They are willing to enter into a transaction for the asset or liability, that is, they are motivated but not forced or otherwise compelled to do so.

Not-for-Profit Entity

An entity that possesses the following characteristics, in varying degrees, that distinguish it from a business entity:

a. Contributions of significant amounts of resources from resource providers who do not expect commensurate or proportionate pecuniary return

b. Operating purposes other than to provide goods or services at a profit

c. Absence of ownership interests like those of business entities.

Entities that clearly fall outside this definition include the following:

a. All investor-owned entities

b. Entities that provide dividends, lower costs, or other economic benefits directly and proportionately to their owners, members, or participants, such as mutual insurance entities, credit unions, farm and rural electric cooperatives, and employee benefit plans.

Orderly Transaction

A transaction that assumes exposure to the market for a period before the measurement date to allow for marketing activities that are usual and customary for transactions involving such assets or liabilities; it is not a forced transaction (for example, a forced liquidation or distress sale).

Public Business Entity

A public business entity is a business entity meeting any one of the criteria below. Neither a not-for-profit entity nor an employee benefit plan is a business entity.

a. It is required by the U.S. Securities and Exchange Commission (SEC) to file or furnish financial statements, or does file or furnish financial statements (including voluntary filers), with the SEC (including other entities whose financial statements or financial information are required to be or are included in a filing).

b. It is required by the Securities Exchange Act of 1934 (the Act), as amended, or rules or regulations promulgated under the Act, to file or furnish financial statements with a regulatory agency other than the SEC.

c. It is required to file or furnish financial statements with a foreign or domestic regulatory agency in preparation for the sale of or for purposes of issuing securities that are not subject to contractual restrictions on transfer.

d. It has issued, or is a conduit bond obligor for, securities that are traded, listed, or quoted on an exchange or an over-the-counter market.

e. It has one or more securities that are not subject to contractual restrictions on transfer, and it is required by law, contract, or regulation to prepare U.S. GAAP financial statements (including notes) and make them publicly available on a periodic basis (for example, interim or annual periods). An entity must meet both of these conditions to meet this criterion.

An entity may meet the definition of a public business entity solely because its financial statements or financial information is included in another entity's filing with the SEC. In that case, the entity is only a public business entity for purposes of financial statements that are filed or furnished with the SEC.

Public Entity

An entity that meets any of the following criteria:

a. Has equity securities that trade in a public market, either on a stock exchange (domestic or foreign) or in an over-the-counter market, including securities quoted only locally or regionally

b. Makes a filing with a regulatory agency in preparation for the sale of any class of equity securities in a public market

c. Is controlled by an entity covered by the preceding criteria. That is, a subsidiary of a public entity is itself a public entity.

An entity that has only debt securities trading in a public market (or that has made a filing with a regulatory agency in preparation to trade only debt securities) is not a public entity.

Related Parties
Related parties include:

a. Affiliates of the entity

b. Entities for which investments in their equity securities would be required, absent the election of the fair value option under the Fair Value Option Subsection of Section 825-10-15, to be accounted for by the equity method by the investing entity

c. Trusts for the benefit of employees, such as pension and profit-sharing trusts that are managed by or under the trusteeship of management

d. Principal owners of the entity and members of their immediate families

e. Management of the entity and members of their immediate families

f. Other parties with which the entity may deal if one party controls or can significantly influence the management or operating policies of the other to an extent that one of the transacting parties might be prevented from fully pursuing its own separate interests

g. Other parties that can significantly influence the management or operating policies of the transacting parties or that have an ownership interest in one of the transacting parties and can significantly influence the other to an extent that one or more of the transacting parties might be prevented from fully pursuing its own separate interests.

Settlement of an Award
An action or event that irrevocably extinguishes the issuing entity's obligation under a share-based payment award. Transactions and events that constitute settlements include the following:

a. Exercise of a share option or lapse of an option at the end of its contractual term

b. Vesting of shares

c. Forfeiture of shares or share options due to failure to satisfy a vesting condition

d. An entity's repurchase of instruments in exchange for assets or for fully vested and transferable equity instruments.

The vesting of a share option is not a settlement because the entity remains obligated to issue shares upon exercise of the option.

Suspense Shares
The shares initially held by the employee stock ownership plan in a suspense account are called suspense shares. Suspense shares are shares that have not been released, committed to be released, or allocated to participant accounts. Suspense shares generally collateralize employee stock ownership plan debt.

Top-Up Shares
Top-up shares are shares or cash that an employer contributes to an employee stock ownership plan because the fair value of the shares released is less than the employer's liability for a particular benefit, such as a savings plan match.

718-40-25 Recognition

General Note: The Recognition Section provides guidance on the required criteria, timing, and location (within the financial statements) for recording a particular item in the financial statements. Disclosure is not recognition.

General

718-40-25-1 This Subsection provides guidance on recognition issues applicable to both leveraged and nonleveraged **employee stock ownership plans**. It covers the following issues:

a. Stock with a put option or a guaranteed redemption price (treasury stock recognition)

b. Pension reversion employee stock ownership plans (recognition of assets transferred from the pension plan).

> Stock with a Put Option or a Guaranteed Redemption Price

718-40-25-2 Regardless of whether an employee stock ownership plan is leveraged or nonleveraged, employers are required to give a put option to participants holding employee stock ownership plan shares that are not readily tradable, which on exercise requires the employer to repurchase the shares at **fair value**. **Public entity** sponsors sometimes offer cash redemption options to participants who are eligible to withdraw traded shares from their accounts, which on exercise requires the employer to repurchase the shares at fair value. Employers shall report the satisfaction of such option exercises as purchases of treasury stock.

Pending Content:

Transition Date: *(P) December 16, 2015; (N) December 16, 2015* | **Transition Guidance:** 718-40-65-1

Regardless of whether an employee stock ownership plan is leveraged or nonleveraged, employers are required to give a put option to participants holding employee stock ownership plan shares that are not readily tradable, which on exercise requires the employer to repurchase the shares at **fair value**. **Public entity** sponsors sometimes offer cash redemption options to participants who are eligible to withdraw traded shares from their accounts, which on exercise requires the employer to repurchase the shares at fair value. Employers shall report the satisfaction of such option exercises as purchases of treasury stock.

> **Pension Reversion Employee Stock Ownership Plans**

718-40-25-3 An employer that terminates a defined benefit pension plan may avoid part of the excise tax on an asset reversion by transferring the assets to an existing or newly created employee stock ownership plan, which could be either leveraged or nonleveraged. The reverted assets may be used either to purchase shares of the employer stock or to retire existing employee stock ownership plan debt.

718-40-25-4 If the assets from the pension plan are used by the employee stock ownership plan to purchase employer shares, the employer shall report the share issuance the same way as other share issuances to an employee stock ownership plan. The issuance of shares or the sale of treasury shares to the employee stock ownership plan shall be recognized when it occurs, and a corresponding charge to unearned employee stock ownership plan shares, a contra-equity account, shall be reported. If the shares are purchased on the market, the employer shall similarly charge unearned employee stock ownership plan shares. (The credit would be to cash.)

718-40-25-5 Because the number of shares the employee stock ownership plan acquires in a pension plan reversion is usually more than the Internal Revenue Service (IRS) permits to be allocated to participant accounts in a single year, some of the shares are held in a suspense account until they are **committed to be released** in future years for allocation to participant accounts. The guidance in this Subtopic, for shares held by leveraged employee stock ownership plans, shall be applied to suspense account shares.

718-40-25-6 If the assets from the pension plan reversion are used to repay the debt of an existing employee stock ownership plan, employee stock ownership plan shares are committed to be released from suspense. In such situations, the guidance for leveraged employee stock ownership plans in this Subtopic shall be followed. The employer shall reduce the debt as it is repaid and reduce unearned employee stock ownership plan shares as shares are committed to be released. How the committed-to-be-released shares are used determines what accounts are charged upon release of shares (see paragraphs 718-40-25-11 through 25-15).

Leveraged Employee Stock Ownership Plans

718-40-25-7 This Subsection provides recognition guidance for leveraged **employee stock ownership plans**. It is organized as follows:

a. Debt financing

b. Purchase of shares by a leveraged employee stock ownership plan

c. Release of leveraged employee stock ownership plan shares

d. Dividends on employee stock ownership plan shares

> **Debt Financing**

718-40-25-8 Paragraph 718-40-05-3 provides background on debt financing by an employee stock ownership plan.

718-40-25-9 For purposes of applying this Subtopic, employee stock ownership plan debt is characterized as follows:

a. Employers that sponsor an employee stock ownership plan with a **direct loan** shall report the obligations of the employee stock ownership plan to the outside lender as debt. Furthermore, employers shall accrue interest cost on the debt and shall report cash payments to the employee stock ownership plan that are used by the employee stock ownership plan to service debt, regardless of whether the source of cash is employer contributions or dividends, as reductions of the debt and accrued interest payable when the employee stock ownership plan makes the payments to the outside lender.

b. Employers that sponsor an employee stock ownership plan with an **indirect loan** shall report outside loans as debt. Employers shall not report a loan receivable from the employee stock ownership plan as an asset and shall, therefore, not recognize interest income on such receivable. Employers shall accrue interest cost on the outside loan and shall report loan payments as reductions of the principal and accrued interest payable. Contributions to the employee stock ownership plan and the concurrent payments from the employee stock ownership to the employer for debt service would not be recognized in the employer's financial statements.

c. Employee stock ownership plans with indirect loans and employer loans are often referred to as internally leveraged.

d. Employers that sponsor an employee stock ownership plan with an **employer loan** shall not report the employee stock ownership plan's note payable and the employer's note receivable in the employer's balance sheet. Accordingly, employers shall not recognize interest cost or interest income on an employer loan.

> **Purchase of Shares by a Leveraged Employee Stock Ownership Plan**

718-40-25-10 An employer shall report the issuance of shares or the sale of treasury shares to an employee stock ownership plan when they occur and shall report a corresponding charge to unearned employee stock ownership plan shares, a contra-equity account. Furthermore, even if a leveraged employee stock ownership plan buys outstanding shares of employer stock on the market rather than from the employer, the employer shall charge unearned employee stock ownership plan shares and credit either cash or debt, depending on whether the employee stock ownership plan is internally or externally leveraged (see the preceding paragraph).

> **Release of Leveraged Employee Stock Ownership Plan Shares**

718-40-25-11 Employee stock ownership plan shares are released for different purposes:

a. To compensate **employees** directly

b. To settle employer liabilities for other employee benefits

c. To replace dividends on **allocated shares** that are used for debt service.

718-40-25-12 As employee stock ownership plan shares are **committed to be released**, unearned employee stock ownership plan shares should be credited and, depending on the purpose for which the shares are released shall be charged to one of the following accounts:

a. Compensation cost

b. Dividends payable

c. Compensation liabilities.

718-40-25-13 Under this Subtopic, when shares are committed to be released, rather than when shares are legally released, is significant for accounting purposes. Employee stock ownership plan shares are legally released from an employee stock ownership plan's suspense account (and from serving as collateral for employee stock ownership plan debt) when debt payments are made, but the employee service to which the shares released relates is continuous. For purposes of reporting compensation cost and satisfaction of liabilities under this Subtopic, accounting recognition shall occur when shares are committed to be released, which may occur before the shares are legally released. Shares that have not been legally released, but that relate to employee services rendered during an accounting period (interim or annual) ending before the related debt service payment is made, shall be considered committed to be released. The periods of employee service to which shares relate are generally specified in the employee stock ownership plan documents.

718-40-25-14 Some employers agree to provide a specified or determinable benefit, such as a contribution to a 401(k) plan or to a formula profit-sharing plan, to employees and use the employee stock ownership plan to partially or fully fund the benefit. Employers shall recognize compensation cost and liabilities associated with providing such benefits to employees in the same manner they would had an employee stock ownership plan not been used to fund the benefit. For employee stock ownership plan shares committed to be released to **settle** liabilities for such benefits, employers shall report satisfaction of the liabilities when the shares are committed to be released to settle the liability. The number of shares released to settle the liability shall be based on the **fair value** of shares as of dates specified by the employers, which are usually specified in the employee stock ownership plan documents.

Pending Content:

Transition Date: *(P) December 16, 2015; (N) December 16, 2015* | **Transition Guidance:** 718-40-65-1

Some employers agree to provide a specified or determinable benefit, such as a contribution to a 401(k) plan or to a formula profit-sharing plan, to employees and use the employee stock ownership plan to partially or fully fund the benefit. Employers shall recognize compensation cost and liabilities associated with providing such benefits to employees in the same manner they would had an employee stock ownership plan not been used to fund the benefit. For employee stock ownership plan shares committed to be released to **settle** liabilities for such benefits, employers shall report satisfaction of the liabilities when the shares are committed to be released to settle the liability. The number of shares released to settle the liability shall be based on the **fair value** of shares as of dates specified by the employers, which are usually specified in the employee stock ownership plan documents.

> Dividends on Employee Stock Ownership Plan Shares

718-40-25-15 The Internal Revenue Code allows employers to use dividends on employee stock ownership plan shares that have been allocated to participants for debt service if participants are allocated shares of employer stock with a fair value no less than the amount of the dividends used for debt service. If shares released will include shares designated to replace dividends on previously allocated shares used for debt service, employers shall report the settlement of the dividend payable when the shares are committed to be released to replace the dividends on shares used for debt service. (See the following two paragraphs; only dividends on allocated shares shall be charged to retained earnings.) The number of shares committed to be released to replace the dividends on allocated shares used for debt service shall be based on the fair value of shares as of dates specified by the employer, which are usually specified in the employee stock ownership plan documents based on the employer's interpretation of current Internal Revenue Service regulations.

718-40-25-16 Because employers control the use of dividends on unallocated shares, dividends on unallocated shares shall not be considered dividends for financial reporting purposes. Dividends on unallocated shares used to pay debt service shall be reported as a reduction of debt or of accrued interest payable. Dividends on unallocated shares paid to participants or added to participant accounts shall be reported as compensation cost.

718-40-25-17 Dividends on allocated shares shall be charged to retained earnings. The dividends payable may be satisfied either by contributing cash to the participant accounts, by contributing additional shares to participant accounts, or by releasing shares from the employee stock ownership plans suspense account to participant accounts (see paragraph 718-40-25-15).

Nonleveraged Employee Stock Ownership Plans

718-40-25-18 This Subsection provides recognition guidance for nonleveraged **employee stock ownership plans**. It is organized as follows:

a. Contribution of shares to the employee stock ownership plan
b. Dividends on employee stock ownership plan shares
c. Shares allocated by year-end

> Contribution of Shares to the Employee Stock Ownership Plan

718-40-25-19 Employers with nonleveraged employee stock ownership plans shall report compensation cost equal to the contribution called for in the period under the plan.

> Dividends on Employee Stock Ownership Plan Shares

718-40-25-20 Employers with nonleveraged employee stock ownership plans shall charge dividends on shares held by the employee stock ownership plans to retained earnings, except that dividends on suspense account shares of a pension reversion employee stock ownership plan shall be accounted for the same way as dividends on suspense account shares of leveraged employee stock ownership plans (see paragraph 718-40-25-15 through 25-17).

> Shares Allocated by Year-End

718-40-25-21 An employer with a nonleveraged employee stock ownership plan periodically contributes its shares or cash to its employee stock ownership plan on behalf of **employees**. The shares contributed or acquired with the cash contributed, which may be outstanding shares, treasury shares, or newly issued shares, shall be allocated to participant accounts and held by the employee stock ownership plan until distributed to the employees at a future date, such as on the date of termination or retirement. The shares of employer stock obtained by the nonleveraged employee stock ownership plan shall be allocated to individual participant accounts as of the end of the employee stock ownership plan's fiscal year. While this is the accounting treatment of employee stock ownership plan shares, it is mandated by tax law. The Codification does not keep up with changes in the tax law.

718-40-30 Initial Measurement

General Note: The Initial Measurement Section provides guidance on the criteria and amounts used to measure a particular item at the date of initial recognition.

Leveraged Employee Stock Ownership Plans

718-40-30-1 Regardless of the account charged (see paragraphs 718-40-25-11 through 25-12), the amount of the charge shall be based on fair values of **committed-to-be-released shares**.

718-40-30-2 Some employers establish **employee stock ownership plans** that are not linked to any other **employee** benefit or compensation promise; therefore, the employee stock ownership plan shares directly compensate the employees. For employee stock ownership plan shares committed to be released to compensate employees directly, the employer shall recognize compensation cost equal to the **fair value** of the shares committed to be released. The shares generally shall be deemed to be committed to be released ratably during an accounting period as the employees perform services, and, accordingly, average fair values shall be used to determine the amount of compensation cost to recognize each reporting period (interim or annual). The amount of compensation cost recognized in previous interim periods shall not be adjusted for subsequent changes in the fair value of shares.

Pending Content:

Transition Date: *(P) December 16, 2015; (N) December 16, 2015* | **Transition Guidance: 718-40-65-1**

Some employers establish **employee stock ownership plans** that are not linked to any other **employee** benefit or compensation promise; therefore, the employee stock ownership plan shares directly compensate the employees. For employee stock ownership plan shares committed to be released to compensate employees directly, the employer shall recognize compensation cost equal to the **fair value** of the shares committed to be released. The shares generally shall be deemed to be committed to be released ratably during an accounting period as the employees perform services, and, accordingly, average fair values shall be used to determine the amount of compensation cost to recognize each reporting period (interim or annual). The amount of compensation cost recognized in previous interim periods shall not be adjusted for subsequent changes in the fair value of shares.

718-40-30-3 Unearned employee stock ownership plan shares shall be credited as shares are committed to be released based on the cost of the shares to the employee stock ownership plan. Employers shall charge or credit the difference between the fair value of shares committed to be released and the cost of those shares to the employee stock ownership plan to shareholders' equity in the same manner as gains and losses on sales of treasury stock (generally to additional paid-in capital).

718-40-30-4 The fair value of employee stock ownership plan shares is needed to apply certain provisions of this Subtopic. The fair value of an employee stock ownership plan share is the amount the seller could reasonably expect to receive for it in a current sale between a willing buyer and a willing seller, that is, other than a forced or liquidation sale. For shares that are traded, the price in the most active market shall be used to measure fair value. If there is no market price, the employer's best estimate of fair value shall be used. The use of independent experts may be necessary to estimate fair value. For example, the amount determined in a recent (within 12 months of the employer's year-end) independent stock valuation report may aid in determining the best estimate of fair value.

Pending Content:

Transition Date: *(P) December 16, 2015; (N) December 16, 2015* | **Transition Guidance: 718-40-65-1**

The **fair value** of employee stock ownership plan shares is needed to apply certain provisions of this Subtopic.

Nonleveraged Employee Stock Ownership Plans

718-40-30-5 Compensation cost shall be measured as the **fair value** of the shares contributed to or committed to be contributed to the **employee stock ownership plan** or as the cash contributed to or committed to be contributed to the employee stock ownership plan, as appropriate under the terms of the plan.

Pending Content:

Transition Date: *(P) December 16, 2015; (N) December 16, 2015* | **Transition Guidance: 718-40-65-1**

Compensation cost shall be measured as the **fair value** of the shares contributed to or committed to be contributed to the **employee stock ownership plan** or as the cash contributed to or committed to be contributed to the employee stock ownership plan, as appropriate under the terms of the plan.

718-40-35 Subsequent Measurement

General Note: The Subsequent Measurement Section provides guidance on an entity’s subsequent measurement and subsequent recognition of an item. Situations that may result in subsequent changes to carrying amount include impairment, credit losses, fair value adjustments, depreciation and amortization, and so forth.

Leveraged Employee Stock Ownership Plans

> Debt Repayment

718-40-35-1 Debt is generally repaid by the **employee stock ownership plan** from employer contributions and dividends on the employer's stock. As the debt is repaid, **suspense shares** are released from the suspense account, and the released shares must be allocated to individual accounts as of the end of the employee stock ownership plan's fiscal year.

718-40-40 Derecognition

General Note: The Derecognition Section provides guidance on determining whether and when an entity should remove an item from the financial statements. For example, the entity would derecognize an asset because it no longer has rights to the asset or it would derecognize a liability because it no longer has any obligation.

Leveraged Employee Stock Ownership Plans

> Plan Termination

718-40-40-1 This Section may contain summaries or references to specific tax code or other regulations that existed at the time that the standard was issued. The Financial Accounting Standards Board (FASB) does not monitor such code or regulations and assumes no responsibility for the current accuracy of the summaries or references. Users must evaluate such code or regulations to determine consistency of the current code or regulation with that presented.

718-40-40-2 Upon termination of a leveraged **employee stock ownership plan**, either in whole or in part, all outstanding debt related to the shares being terminated shall be repaid or refinanced. An employee stock ownership plan may repay the debt using an employer contribution to the plan, dividends on employee stock ownership plan shares, the proceeds from selling **suspense shares** to the employer or to another party, or some combination of these. The tax law limits the shares employers may reacquire to the number of shares with a **fair value** equal to the applicable unpaid debt and requires that the remaining shares, if any, shall be allocated to participants.

Pending Content:

Transition Date: *(P) December 16, 2015; (N) December 16, 2015* | **Transition Guidance: 718-40-65-1**

Upon termination of a leveraged **employee stock ownership plan**, either in whole or in part, all outstanding debt related to the shares being terminated shall be repaid or refinanced. An employee stock ownership plan may repay the debt using an employer contribution to the plan, dividends on employee stock ownership plan shares, the proceeds from selling **suspense shares** to the employer or to another party, or some combination of these. The tax law limits the shares employers may reacquire to the number of shares with a **fair value** equal to the applicable unpaid debt and requires that the remaining shares, if any, shall be allocated to participants.

718-40-40-3 If the employer makes a contribution to the employee stock ownership plan or pays dividends on unallocated shares that are used by the employee stock ownership plan to repay the debt, the employer shall charge the debt and accrued interest payable when the employee stock ownership plan makes the payment to the outside lender. Similarly, an employer sponsoring an employee stock ownership plan with an **indirect loan** shall report loan repayments as reductions of the debt and accrued interest payable.

718-40-40-4 If the employee stock ownership plan sells the suspense shares and uses the proceeds to repay the debt, the employer shall report the release of the suspense shares as a credit to unearned employee stock ownership plan shares based on the cost of the shares to the employee stock ownership plan, charge debt, and accrued interest payable, and recognize the difference in paid-in capital.

718-40-40-5 However, if there is a difference between the amount paid to an outside lender and the net carrying amount of the debt, paragraph 470-50-40-2 requires that difference to be included in the employer's income when the debt is extinguished.

718-40-40-6 If an employer reacquires the suspense shares from the employee stock ownership plan, the purchase of the shares shall be accounted for as a treasury stock transaction. The treasury stock shall be reported at the fair value of the shares at the reacquisition date. Unearned employee stock ownership plan shares shall be credited for the cost of the shares, and the difference shall be recognized in additional paid-in capital.

718-40-40-7 If the fair value of the suspense shares on the termination date is more than the unpaid debt balance, the release of the remaining suspense shares to participants shall be charged to compensation in accordance with paragraphs 718-40-25-11 through 25-15. That is, compensation cost shall equal the fair value of the shares at the date the employee stock ownership plan debt is extinguished, because that is when the shares are committed to be released.

718-40-45 Other Presentation Matters

General Note: The Other Presentation Matters Section provides guidance on other presentation matters not addressed in the Recognition, Initial Measurement, Subsequent Measurement, and Derecognition Sections. Other presentation matters may include items such as current or long-term balance sheet classification, cash flow presentation, earnings per share matters, and so forth. The FASB Codification also contains Presentation Topics, which provide guidance for general presentation and display items. See those Topics for general guidance.

General

> EPS

718-40-45-1 Dividends on preferred stock held by an **employee stock ownership plan** shall be deducted from net income net of any applicable income tax benefit when computing both basic and diluted earnings per share (EPS) if that preferred stock is considered outstanding (that is, if the employee stock ownership plan shares are allocated).

> Issuance of Shares or the Sale of Shares to an Employee Stock Ownership Plan

718-40-45-2 Paragraph 718-40-25-10 states that an employer shall report the issuance of shares or the sale of treasury shares to an employee stock ownership plan when they occur and shall report a corresponding charge to unearned employee stock ownership plan shares, a contra-equity account. That account should be presented as a separate item in the balance sheet.

Leveraged Employee Stock Ownership Plans

> EPS

718-40-45-3 For purposes of computing basic and diluted earnings per share (EPS), **employee stock ownership plan** shares that have been **committed to be released** shall be considered outstanding. Employee stock ownership plan shares that have not been committed to be released shall not be considered outstanding.

718-40-45-4 Employers that use dividends on allocated employee stock ownership plan shares to pay debt service shall adjust earnings applicable to common shares in the if-converted computation for the difference (net of income taxes) between the amount of compensation cost reported and the amount of compensation cost that would have been reported if the **allocated shares** had been converted to common stock at the beginning of the period.

718-40-45-5 Prior period EPS shall not be restated for changes in the conversion rates.

> > Convertible Preferred Shares

718-40-45-6 The number of common shares that will be issued on conversion of the convertible shares held by an employee stock ownership plan that have been committed to be released shall be deemed outstanding in the if-converted EPS computations for diluted EPS if the effect is dilutive. Convertible preferred shares held by the employee stock ownership plan that have not been committed to be released shall not be considered outstanding and, accordingly, would be excluded from the if-converted computations for diluted EPS.

718-40-45-7 When participants withdraw account balances containing convertible preferred shares from an employee stock ownership plan, they may be entitled to receive common shares or cash with a value equal to either the **fair value** of the convertible preferred shares or a stated minimum value per share. Accordingly, if the value of the common stock issuable is less than the stated minimum value or the fair value of the preferred, participants may receive common shares or cash with a value greater than the value of the common shares issuable at the stated conversion rate. In determining EPS, the employer shall presume that such a shortfall will be made up with shares of common stock. However, that presumption may be overcome if past experience or a stated policy provides a reasonable basis to believe that the shortfall will be paid in cash. In applying the if-converted method, the number of common shares issuable on assumed conversion, which shall be included in the denominator of the EPS calculation, shall be the greater of the following:

a. The shares issuable at the stated conversion rate

b. The shares issuable if the participants were to withdraw the shares from their accounts.

Pending Content:

Transition Date: *(P) December 16, 2015; (N) December 16, 2015* | **Transition Guidance:** 718-40-65-1

When participants withdraw account balances containing convertible preferred shares from an employee stock ownership plan, they may be entitled to receive common shares or cash with a value equal to either the **fair value** of the convertible preferred shares or a stated minimum value per share. Accordingly, if the value of the common stock issuable is less than the stated minimum value or the fair value of the preferred, participants may receive common shares or cash with a value greater than the value of the common shares issuable at the stated conversion rate. In determining EPS, the employer shall presume that such a shortfall will be made up with shares of common stock. However, that presumption may be overcome if past experience or a stated policy provides a reasonable basis to believe that the shortfall will be paid in cash. In applying the if-converted method, the number of common shares issuable on assumed conversion, which shall be included in the denominator of the EPS calculation, shall be the greater of the following:

a. The shares issuable at the stated conversion rate

b. The shares issuable if the participants were to withdraw the shares from their accounts.

718-40-45-8 Shares issuable on assumed withdrawal shall be computed based on the ratio of the average fair value of the convertible stock (or, if greater, its stated minimum value) to the average fair value of the common stock.

Nonleveraged Employee Stock Ownership Plans

> EPS

718-40-45-9 All shares held by a nonleveraged **employee stock ownership plan** shall be treated as outstanding in computing the employer's earnings per share (EPS), except the **suspense account shares** of a pension reversion employee stock ownership plan, which are not treated as outstanding until they are committed to be released for allocation to participant accounts. If a nonleveraged employee stock ownership plan holds convertible preferred stock, the guidance in paragraphs 718-40-45-6 through 45-8 for leveraged employee stock ownership plans shall be considered.

718-40-50 Disclosure

General Note: The Disclosure Section provides guidance regarding the disclosure in the notes to financial statements. In some cases, disclosure may relate to disclosure on the face of the financial statements.

General

718-40-50-1 An employer sponsoring an **employee stock ownership plan** shall disclose all of the following information about the plan, if applicable:

a. A description of the plan, the basis for determining contributions, including the **employee** groups covered, and the nature and effect of significant matters affecting comparability of information for all periods presented. For leveraged employee stock ownership plans and pension reversion employee stock ownership plans, the description shall include the basis for releasing shares and how dividends on allocated and unallocated shares are used.

b. A description of the accounting policies followed for employee stock ownership plan transactions, including the method of measuring compensation, the classification of dividends on employee stock ownership plan shares, and the treatment of employee stock ownership plan shares for earnings per share (EPS) computations. If the employer has both old employee stock ownership plan shares for which it does not adopt the guidance in this Subtopic and new employee stock ownership plan shares for which the guidance in this Subtopic is required, the accounting policies for both blocks of shares shall be described.

c. The amount of compensation cost recognized during the period.

d. The number of **allocated shares**, **committed-to-be-released shares**, and **suspense shares** held by the employee stock ownership plan at the balance-sheet date. This disclosure shall be made separately for shares accounted for under this Subtopic and for grandfathered employee stock ownership plan shares.

e. The **fair value** of unearned employee stock ownership plan shares at the balance-sheet date for shares accounted for under this Subtopic. (Future tax deductions will be allowed only for the employee stock ownership plan's cost of unearned employee stock ownership plan shares.) This disclosure need not be made for old employee stock ownership plan shares for which the employer does not apply the guidance in this Subtopic.

f. The existence and nature of any repurchase obligation, including disclosure of the fair value (see paragraph 718-40-30-4) of the shares allocated as of the balance sheet date, which are subject to a repurchase obligation.

g. The amount and treatment in the EPS computation of the tax benefit related to dividends paid to any employee stock ownership plan, if material.

Pending Content:

Transition Date: *(P) December 16, 2015; (N) December 16, 2015* | **Transition Guidance:** **718-40-65-1**

An employer sponsoring an **employee stock ownership plan** shall disclose all of the following information about the plan, if applicable:

a. A description of the plan, the basis for determining contributions, including the **employee** groups covered, and the nature and effect of significant matters affecting comparability of information for all periods presented. For leveraged employee stock ownership plans and pension reversion employee stock ownership plans, the description shall include the basis for releasing shares and how dividends on allocated and unallocated shares are used.

b. A description of the accounting policies followed for employee stock ownership plan transactions, including the method of measuring compensation, the classification of dividends on employee stock ownership plan shares, and the treatment of employee stock ownership plan shares for earnings per share (EPS) computations. If the employer has both old employee stock ownership plan shares for which it does not adopt the guidance in this Subtopic and new employee stock ownership plan shares for which the guidance in this Subtopic is required, the accounting policies for both blocks of shares shall be described.

c. The amount of compensation cost recognized during the period.

d. The number of **allocated shares**, **committed-to-be-released shares**, and **suspense shares** held by the employee stock ownership plan at the balance-sheet date. This disclosure shall be made separately for shares accounted for under this Subtopic and for grandfathered employee stock ownership plan shares.

e. The **fair value** of unearned employee stock ownership plan shares at the balance-sheet date for shares accounted for under this Subtopic. (Future tax deductions will be allowed only for the employee stock ownership plan's cost of unearned employee stock ownership plan shares.) This disclosure need not be made for old employee stock ownership plan shares for which the employer does not apply the guidance in this Subtopic.

f. The existence and nature of any repurchase obligation, including disclosure of the fair value (see paragraph 718-40-30-4) of the shares allocated as of the balance sheet date, which are subject to a repurchase obligation.

g. The amount and treatment in the EPS computation of the tax benefit related to dividends paid to any employee stock ownership plan, if material.

718-40-55 Implementation Guidance and Illustrations

General Note: The Implementation Guidance and Illustrations Section contains implementation guidance and illustrations that are an integral part of the Subtopic. The implementation guidance and illustrations do not address all possible variations. Users must consider carefully the actual facts and circumstances in relation to the requirements of the Subtopic.

General

> Illustrations

718-40-55-1 This Section contains illustrations of the requirements of this Subtopic for employers with **employee stock ownership plans**.

718-40-55-2 The Examples do not address all possible circumstances that may arise in applying the guidance in this Subtopic. The Examples are for annual reporting periods and, accordingly, do not demonstrate the application of the Subtopic to interim financial statements. However, depending on the circumstances, many of the journal entries illustrated would be made for interim financial statements.

Leveraged Employee Stock Ownership Plans

> Illustrations

> > Example 1: Employee Stock Ownership Plan Leveraged with a Direct or Indirect Loan

718-40-55-3 The following Cases illustrate the guidance in paragraphs 718-40-25-7 through 25-17; 718-40-30-1 through 30-4; 718-40-35-1; 718-40-40-1 through 40-7; and 718-40-45-3 through 45-8:

a. A common-stock leveraged **employee stock ownership plan** with a **direct loan** (Case A)

b. A common-stock leveraged employee stock ownership plan used to fund the employer's match of a 401(k) savings plan with an **indirect loan** (Case B)

c. A convertible-preferred-stock leveraged employee stock ownership plan with a direct loan (Case C).

> > > Case A: A Common-Stock Leveraged Employee Stock Ownership Plan with a Direct Loan

718-40-55-4 This Case illustrates a common stock leveraged employee stock ownership plan with a direct loan. This Case has the following assumptions:

a. On January 1, Year 1, Entity A establishes a leveraged employee stock ownership plan.

b. The employee stock ownership plan borrows $1,000,000 from an outside lender at 10 percent for 5 years and uses the proceeds to buy 100,000 shares of newly issued common stock of the sponsor for $10 per share, which is the market price of those shares on the date of issuance.

c. Debt service is funded by cash contributions and dividends on employer stock held by the employee stock ownership plan.

d. Dividends on all shares held by the employee stock ownership plan are used for debt service.

e. Cash contributions are made at the end of each year.

f. The year-end and average market values of a share of common stock follow.

Year	Year-End	Average
1	$ 11.50	$ 10.75
2	9.00	10.25
3	10.00	9.50
4	12.00	11.00
5	14.40	13.20

g. The common stock pays normal dividends at the end of each quarter of 12.5 cents per share ($50,000 for the employee stock ownership plan's shares each year). Accordingly, in this Case, the average **fair value** of shares is used to determine the number of shares used to satisfy the employers' obligation to replace dividends on **allocated shares** used for debt service.

h. Principal and interest are payable in equal annual installments at the end of each year. Debt service is as follows.

Year	Principal	Interest	Total Debt Services
1	$ 163,800	$ 100,000	$ 263,800
2	180,200	83,600	263,800
3	198,200	65,600	263,800
4	218,000	45,800	263,800
5	239,800	24,000	263,800
	$ 1,000,000	$ 319,000	$ 1,319,000

i. The number of shares released each year is as follows.

Year	Dividends	Compensation	Total
1	0	20,000	20,000
2	976	19,024	20,000
3	2,105	17,895	20,000
4	2,727	17,273	20,000
5	3,030	16,970	20,000

j. The number of shares released for dividends is determined by dividing the amount of dividends on allocated shares by the average fair value of a share of common stock (for Year 2: $10,000 divided by $10.25 equals 976 shares). In this illustration, the remaining shares are released for compensation (for Year 2: 20,000 less 976 equals 19,024 shares).

k. Shares are released from the suspense account for allocation to participants' accounts based on a principal-plus-interest formula. The released shares are allocated to participant accounts the following year. Shares released and allocated follow.

	Cumulative Number of Shares		Average Shares	Year-End
Year	Released	Allocated	Released	Suspense Shares
1	20,000	0	10,000	80,000
2	40,000	20,000	30,000	60,000
3	60,000	40,000	50,000	40,000
4	80,000	60,000	70,000	20,000
5	100,000	80,000	90,000	0

l. Income before employee stock ownership plan related charges is as follows.

Year	Income
1	$1,800,000
2	1,900,000
3	2,000,000
4	2,100,000
5	2,200,000

m. All interest cost and compensation cost are charged to expense each year.

n. Excluding employee stock ownership plan shares, 1,000,000 shares are outstanding on average each year.

o. Entity A follows the guidance in Subtopic 740-10.

p. Entity A's combined statutory tax rate is 40 percent each year.

q. Entity A's only book-tax differences are those associated with its employee stock ownership plan.

r. No valuation allowance is necessary for deferred tax assets.

Pending Content:

Transition Date: *(P) December 16, 2015; (N) December 16, 2015* | **Transition Guidance:** 718-40-65-1

This Case illustrates a common stock leveraged employee stock ownership plan with a direct loan. This Case has the following assumptions:

a. On January 1, Year 1, Entity A establishes a leveraged employee stock ownership plan.

b. The employee stock ownership plan borrows $1,000,000 from an outside lender at 10 percent for 5 years and uses the proceeds to buy 100,000 shares of newly issued common stock of the sponsor for $10 per share, which is the market price of those shares on the date of issuance.

c. Debt service is funded by cash contributions and dividends on employer stock held by the employee stock ownership plan.

d. Dividends on all shares held by the employee stock ownership plan are used for debt service.

e. Cash contributions are made at the end of each year.

f. The year-end and average market values of a share of common stock follow.

Year	Year-End	Average
1	$ 11.50	$ 10.75
2	9.00	10.25
3	10.00	9.50
4	12.00	11.00
5	14.40	13.20

g. The common stock pays normal dividends at the end of each quarter of 12.5 cents per share ($50,000 for the employee stock ownership plan's shares each year). Accordingly, in this Case, the average **fair value** of shares is used to determine the number of shares used to satisfy the employers' obligation to replace dividends on **allocated shares** used for debt service.

h. Principal and interest are payable in equal annual installments at the end of each year. Debt service is as follows.

Year	Principal	Interest	Total Debt Services
1	$ 163,800	$ 100,000	$ 263,800
2	180,200	83,600	263,800
3	198,200	65,600	263,800
4	218,000	45,800	263,800
5	239,800	24,000	263,800
	$ 1,000,000	$ 319,000	$ 1,319,000

i. The number of shares released each year is as follows.

Year	Dividends	Compensation	Total
1	0	20,000	20,000
2	976	19,024	20,000
3	2,105	17,895	20,000
4	2,727	17,273	20,000
5	3,030	16,970	20,000

j. The number of shares released for dividends is determined by dividing the amount of dividends on allocated shares by the average fair value of a share of common stock (for Year 2: $10,000 divided by $10.25 equals 976 shares). In this illustration, the remaining shares are released for compensation (for Year 2: 20,000 less 976 equals 19,024 shares).

k. Shares are released from the suspense account for allocation to participants' accounts based on a principal-plus-interest formula. The released shares are allocated to participant accounts the following year. Shares released and allocated follow.

Year	Cumulative Number of Shares Released	Cumulative Number of Shares Allocated	Average Shares Released	Year-End Suspense Shares
1	20,000	0	10,000	80,000
2	40,000	20,000	30,000	60,000
3	60,000	40,000	50,000	40,000
4	80,000	60,000	70,000	20,000
5	100,000	80,000	90,000	0

l. Income before employee stock ownership plan related charges is as follows.

Year	Income
1	$1,800,000
2	1,900,000
3	2,000,000
4	2,100,000
5	2,200,000

m. All interest cost and compensation cost are charged to expense each year.

n. Excluding employee stock ownership plan shares, 1,000,000 shares are outstanding on average each year.

o. Entity A follows the guidance in Subtopic 740-10.

p. Entity A's combined statutory tax rate is 40 percent each year.

q. Entity A's only book-tax differences are those associated with its employee stock ownership plan.

r. No valuation allowance is necessary for deferred tax assets.

718-40-55-5 The following table sets forth Entity A's employee stock ownership plan-related information. All amounts represent changes (credits in parentheses) in account balances.

Year	Principal	Unearned Employee Stock Ownership Plan Shares	Paid-In Capital	Dividends	Interest Expense	Compensation Expense	Cash
Notes	(1)	(2)	(3)	(4)	(1)	(5)	(6)
1	$ 163,800	$ (200,000)	$(15,000)	$ -	$100,000	$ 215,000	$ (263,800)
2	180,200	(200,000)	(5,000)	10,000	83,600	195,000	(263,800)
3	198,200	(200,000)	10,000	20,000	65,600	170,000	(263,800)
4	218,000	(200,000)	(20,000)	30,000	45,800	190,000	(263,800)
5	239,800	(200,000)	(64,000)	40,000	24,000	224,000	(263,800)
Total	$ 1,000,000	$ (1,000,000)	$(94,000)	$100,000	$319,000	$ 994,000	$(1,319,000)

Notes:

(1) See the table in (h) of the preceding paragraph.

(2) Total number of shares released for year (20,000) multiplied by the cost per share to employee stock ownership plan ($10).

(3) Total number of shares released for year (20,000) multiplied by the difference between average fair value per share (see the table in [f] of the preceding paragraph) and cost per share to employee stock ownership plan ($10). [Year 1: 20,000 shares multiplied by ($10.75-$10.00)]

(4) Cumulative number of allocated shares (see the table in [k] of the preceding paragraph) multiplied by the dividend per share. [Year 2: 20,000 shares multiplied by $.50]

(5) Number of shares released for compensation (see the table in [i] of the preceding paragraph) multiplied by the average fair value per share for the period (see the table in [f] of the preceding paragraph). The amounts in this column have been rounded.

(6) The cash disbursed each year is comprised of $213,800 contribution and $50,000 in dividends.

718-40-55-6 Entity A would record journal entries from inception through Year 5 as follows.

January 1, Year 1 (inception)

Cash	$ 1,000,000	
Debt		$ 1,000,000
[To record the employee stock ownership plan's loan]		
Unearned employee stock ownership plan shares (equity)	1,000,000	
Common stock and paid-in capital		1,000,000
[To record the issuance of 100,000 shares to the employee stock ownership plan at $10 per share]		

Year 1

Interest expense	100,000	
Accrued interest payable		100,000
[To record interest expense]		
Accrued interest payable	100,000	
Debt	163,800	
Cash		263,800
[To record debt payment (The cash disbursement of $263,800 consists of $50,000 in dividends, none of which is charged to retained earnings in Year 1, and $213,800 supplemental cash contribution to the employee stock ownership plan)]		
Compensation expense	215,000	
Paid-in capital		15,000
Unearned employee stock ownership plan shares		200,000
[To record release of 20,000 shares at an average fair value of $10.75 per share (shares cost employee stock ownership plan $10)]		
Deferred tax asset	14,480	
Provision for income taxes	600,000	
Income taxes payable		614,480
[To record income taxes for Year 1]		

Year 2

Interest expense	$ 83,600	
Accrued interest payable		$ 83,600
[To record interest expense]		
Accrued interest payable	83,600	
Debt	180,200	
Cash		263,800
[To record debt payment (The cash disbursement of $263,800 consists of $50,000 in dividends, $10,000 of which is charged to retained earnings in Year 2, and $213,800 supplemental cash contribution to the employee stock ownership plan)]		
Retained earnings	10,000	
Dividends payable		10,000
[To record declaration of $.50 per share dividend on the 20,000 allocated shares]		
Compensation expense	195,000	
Dividends payable	10,000	
Paid-in capital		5,000
Unearned employee stock ownership plan shares		200,000
[To record release of 20,000 shares (19,024 for compensation and 976 for dividends) at an average fair value of $10.25 per share (shares cost employee stock ownership plan $10 per share)]		
Deferred tax asset	7,920	
Provision for income taxes	646,560	
Income taxes payable		654,480
[To record income taxes for Year 2]		

Year 3

Interest expense	$ 65,600	
Accrued interest payable		$ 65,600
[To record interest expense]		
Accrued interest payable	65,600	
Debt	198,200	
Cash		263,800
[To record debt payment]		
Retained earnings	20,000	
Dividends payable		20,000
[To record declaration of $.50 per share dividend on the 40,000 allocated shares]		
Compensation expense	170,000	
Dividends payable	20,000	
Paid-in capital	10,000	
Unearned employee stock ownership plan shares		200,000
[To record release of 20,000 shares (17,895 for compensation and 2,105 for dividends) at an average fair value of $9.50 per share (shares cost employee stock ownership plan $10 per share)]		
Deferred tax asset	720	
Provision for income taxes	697,760	
Paid-in capital		4,000
Income taxes payable		694,480
[To record income taxes for Year 3]		

Year 4

Interest expense	$ 45,800	
Accrued interest payable		$ 45,800
[To record interest expense]		
Accrued interest payable	45,800	
Debt	218,000	
Cash		263,800
[To record debt payment]		
Retained earnings	30,000	
Dividends payable		30,000
[To record declaration of $.50 per share dividend on the 60,000 allocated shares]		
Compensation expense	190,000	
Dividends payable	30,000	
Paid-in capital		20,000
Unearned employee stock ownership plan shares		200,000
[To record release of 20,000 shares (17,273 for compensation and 2,727 for dividends) at an average fair value of $11.00 per share (shares cost employee stock ownership plan $10 per share)]		
Provision for income taxes	737,680	
Paid-in capital	4,000	
Deferred tax asset		7,200
Income taxes payable		734,480
[To record income taxes for Year 4]		

Year 5

Interest expense	$ 24,000	
Accrued interest payable		$ 24,000
[To record interest expense]		
Accrued interest payable	24,000	
Debt	239,800	
Cash		263,800
[To record debt payment]		
Retained earnings	40,000	
Dividends payable		40,000
[To record declaration of $.50 per share dividend on the 80,000 allocated shares]		
Compensation expense	224,000	
Dividends payable	40,000	
Paid-in capital		64,000
Unearned employee stock ownership plan shares		200,000
[To record release of 20,000 shares (16,970 for compensation and 3,030 for dividends) at an average fair value of $13.20 per share (shares cost employee stock ownership plan $10 per share)]		
Provision for income taxes	790,400	
Deferred tax asset		15,920
Income taxes payable		774,480
[To record income taxes for Year 5]		

Pending Content:

Transition Date: *(P) December 16, 2016; (N) December 16, 2017* | **Transition Guidance:** **718-10-65-4**

Entity A would record journal entries from inception through Year 5 as follows.

January 1, Year 1 (inception)		
Cash	$ 1,000,000	
Debt		$ 1,000,000
[To record the employee stock ownership plan's loan]		
Unearned employee stock ownership plan shares (equity)	1,000,000	
Common stock and paid-in capital		1,000,000
[To record the issuance of 100,000 shares to the employee stock ownership plan at $10 per share]		
Year 1		
Interest expense	100,000	
Accrued interest payable		100,000
[To record interest expense]		
Accrued interest payable	100,000	
Debt	163,800	
Cash		263,800
[To record debt payment (The cash disbursement of $263,800 consists of $50,000 in dividends, none of which is charged to retained earnings in Year 1, and $213,800 supplemental cash contribution to the employee stock ownership plan)]		
Compensation expense	215,000	
Paid-in capital		15,000
Unearned employee stock ownership plan shares		200,000
[To record release of 20,000 shares at an average fair value of $10.75 per share (shares cost employee stock ownership plan $10)]		
Deferred tax asset	14,480	
Provision for income taxes	600,000	
Income taxes payable		614,480
[To record income taxes for Year 1]		
Year 2		
Interest expense	$ 83,600	
Accrued interest payable		$ 83,600
[To record interest expense]		
Accrued interest payable	83,600	
Debt	180,200	
Cash		263,800
[To record debt payment (The cash disbursement of $263,800 consists of $50,000 in dividends, $10,000 of which is charged to retained earnings in Year 2, and $213,800 supplemental cash contribution to the employee stock ownership plan)]		
Retained earnings	10,000	
Dividends payable		10,000
[To record declaration of $.50 per share dividend on the 20,000 allocated shares]		
Compensation expense	195,000	
Dividends payable	10,000	
Paid-in capital		5,000
Unearned employee stock ownership plan shares		200,000
[To record release of 20,000 shares (19,024 for compensation and 976 for dividends) at an average fair value of $10.25 per share (shares cost employee stock ownership plan $10 per share)]		
Deferred tax asset	7,920	
Provision for income taxes	646,560	
Income taxes payable		654,480
[To record income taxes for Year 2]		

Year 3		
Interest expense	$ 65,600	
Accrued interest payable		$ 65,600
[To record interest expense]		
Accrued interest payable	65,600	
Debt	198,200	
Cash		263,800
[To record debt payment]		
Retained earnings	20,000	
Dividends payable		20,000
[To record declaration of $.50 per share dividend on the 40,000 allocated shares]		
Compensation expense	170,000	
Dividends payable	20,000	
Paid-in capital	10,000	
Unearned employee stock ownership plan shares		200,000
[To record release of 20,000 shares (17,895 for compensation and 2,105 for dividends) at an average fair value of $9.50 per share (shares cost employee stock ownership plan $10 per share)]		
Deferred tax asset	720	
Provision for income taxes	693,760	
Income taxes payable		694,480
[To record income taxes for Year 3]		

Year 4		
Interest expense	$ 45,800	
Accrued interest payable		$ 45,800
[To record interest expense]		
Accrued interest payable	45,800	
Debt	218,000	
Cash		263,800
[To record debt payment]		
Retained earnings	30,000	
Dividends payable		30,000
[To record declaration of $.50 per share dividend on the 60,000 allocated shares]		
Compensation expense	190,000	
Dividends payable	30,000	
Paid-in capital		20,000
Unearned employee stock ownership plan shares		200,000
[To record release of 20,000 shares (17,273 for compensation and 2,727 for dividends) at an average fair value of $11.00 per share (shares cost employee stock ownership plan $10 per share)]		
Provision for income taxes	741,680	
Deferred tax asset		7,200
Income taxes payable		734,480
[To record income taxes for Year 4]		

Year 5		
Interest expense	$ 24,000	
Accrued interest payable		$ 24,000
[To record interest expense]		
Accrued interest payable	24,000	
Debt	239,800	
Cash		263,800
[To record debt payment]		
Retained earnings	40,000	
Dividends payable		40,000
[To record declaration of $.50 per share dividend on the 80,000 allocated shares]		
Compensation expense	224,000	
Dividends payable	40,000	
Paid-in capital		64,000
Unearned employee stock ownership plan shares		200,000
[To record release of 20,000 shares (16,970 for compensation and 3,030 for dividends) at an average fair value of $13.20 per share (shares cost employee stock ownership plan $10 per share)]		
Provision for income taxes	790,400	
Deferred tax asset		15,920
Income taxes payable		774,480
[To record income taxes for Year 5]		

718-40-55-7 Assuming Entity A terminates its employee stock ownership plan at the end of Year 2 (when the fair value of the **suspense shares** is $540,000 [60,000 shares multiplied by $9 per share], the unearned employee stock ownership plan share balance is $600,000, and the unpaid debt balance is $656,000), and assuming the suspense shares are sold to pay down the debt, Entity A would make the following journal entry.

Debt	$ 656,000	
Additional paid-in capital	60,000	
Unearned employee stock ownership plan shares		$ 600,000
Cash		116,000
[To record repayment of the employee stock ownership plan's loan and termination of the plan]		

718-40-55-8 The following tables set forth Entity A's tax (assuming no termination) and earnings per share (EPS) computations.

	Year				
	1	2	3	4	5
Income before employee stock ownership plan	$1,800,000	$1,900,000	$2,000,000	$2,100,000	$2,200,000
Interest expense	(100,000)	(83,600)	(65,600)	(45,800)	(24,000)
Compensation expense	(215,000)	(195,000)	(170,000)	(190,000)	(224,000)
Pretax income	1,485,000	1,621,400	1,764,400	1,864,200	1,952,000
Provision for income tax					
Currently payable	614,480	654,480	694,480	734,480	774,480
Deferred	(14,480)	(7,920)	(720)	7,200	15,920
Shareholders' equity	-	-	4,000 (a)	(4,000) (a)	-
Total	600,000	646,560	697,760	737,680	790,400
Net income	$ 885,000	$ 974,840	$1,066,640	$1,126,520	$1,161,600
Average shares outstanding	1,010,000	1,030,000	1,050,000	1,070,000	1,090,000
Earnings per share	$ .88	$ .95	$ 1.02	$ 1.05	$ 1.07

(a) See paragraphs 718-740-45-5 through 45-6. In Year 3, the amount is calculated as follows: 20,000 shares released multiplied by $.50 excess cost over average fair value per share multiplied by 40 percent tax rate.

	Year 1	Year 2	Year 3	Year 4	Year 5
Current provision:					
Income before employee stock ownership plan	$1,800,000	$1,900,000	$2,000,000	$2,100,000	$2,200,000
Employee stock ownership plan contribution	(213,800)	(213,800)	(213,800)	(213,800)	(213,800)
Employee stock ownership plan dividends	(50,000)	(50,000)	(50,000)	(50,000)	(50,000)
Taxable income	1,536,200	1,636,200	1,736,200	1,836,200	1,936,200
Multiplied by 40 percent	$ 614,480	$ 654,480	$ 694,480	$ 734,480	$ 774,480
Deferred provision:					
Reduction in unearned employee stock ownership plan shares for financial reporting	$ 200,000	$ 200,000	$ 200,000	$ 200,000	$ 200,000
Related tax deduction (a)	163,800	180,200	198,200	218,800	239,800
Difference	(36,200)	(19,800)	(1,800)	18,000	39,800
Tax rate	40%	40%	40%	40%	40%
Deferred tax expense ÷ (benefit)	$ (14,480)	$ (7,920)	$ (720)	7,200	15,920

(a) This amount is the principal repayment.

	Year 1	Year 2	Year 3	Year 4	Year 5
Pretax income	$1,485,000	$1,621,400	$1,764,400	$1,864,200	$1,952,000
Tax at 40 percent (statutory rate)	594,000	648,560	705,760	745,680	780,800
Benefit of employee stock ownership plan dividends	-	(4,000)	(8,000)	(12,000)	(16,000)
Effect of difference between average fair value and cost of released shares	6,000	2,000	-	4,000	25,600
Provision as reported	$ 600,000	$ 646,560	$ 697,760	$ 737,680	$ 790,400

Pending Content:

Transition Date: *(P) December 16, 2016; (N) December 16, 2017* | **Transition Guidance:** **718-10-65-4**

The following tables set forth Entity A's tax (assuming no termination) and earnings per share (EPS) computations.

	Year 1	Year 2	Year 3	Year 4	Year 5
Income before employee stock ownership plan	$ 1,800,000	$ 1,900,000	$ 2,000,000	$ 2,100,000	$ 2,200,000
Interest expense	(100,000)	(83,600)	(65,600)	(45,800)	(24,000)
Compensation expense	(215,000)	(195,000)	(170,000)	(190,000)	(224,000)
Pretax income	1,485,000	1,621,400	1,764,400	1,864,200	1,952,000
Provision for income tax					
Currently payable	614,480	654,480	694,480	734,480	774,480
Deferred	(14,480)	(7,920)	(720)	7,200	15,920
Total	600,000	646,560	693,760	741,680	790,400
Net income	$ 885,000	$ 974,840	$ 1,070,640	$ 1,122,520	$ 1,161,600
Average shares outstanding	1,010,000	1,030,000	1,050,000	1,070,000	1,090,000
Earnings per share	$ .88	$ .95	$ 1.02	$ 1.05	$ 1.07

	Year 1	Year 2	Year 3	Year 4	Year 5
Current provision:					
Income before employee stock ownership plan	$1,800,000	$1,900,000	$2,000,000	$2,100,000	$2,200,000
Employee stock ownership plan contribution	(213,800)	(213,800)	(213,800)	(213,800)	(213,800)
Employee stock ownership plan dividends	(50,000)	(50,000)	(50,000)	(50,000)	(50,000)
Taxable income	1,536,200	1,636,200	1,736,200	1,836,200	1,936,200
Multiplied by 40 percent	$ 614,480	$ 654,480	$ 694,480	$ 734,480	$ 774,480
Deferred provision:					
Reduction in unearned employee stock ownership plan shares for financial reporting	$ 200,000	$ 200,000	$ 200,000	$ 200,000	$ 200,000
Related tax deduction (a)	163,800	180,200	198,200	218,800	239,800
Difference	(36,200)	(19,800)	(1,800)	18,000	39,800
Tax rate	40%	40%	40%	40%	40%
Deferred tax expense ÷ (benefit)	$ (14,480)	$ (7,920)	$ (720)	7,200	15,920

(a) This amount is the principal repayment.

	Year 1	Year 2	Year 3	Year 4	Year 5
Pretax income	$ 1,485,000	$ 1,621,400	$ 1,764,400	$ 1,864,200	$ 1,952,000
Tax at 40 percent (statutory rate)	594,000	648,560	705,760	745,680	780,800
Benefit of employee stock ownership plan dividends	-	(4,000)	(8,000)	(12,000)	(16,000)
Effect of difference between average fair value and cost of released shares	6,000	2,000	(4,000)	8,000	25,600
Provision as reported	$ 600,000	$ 646,560	$ 693,760	$ 741,680	$ 790,400

718-40-55-9 The entity would provide the following disclosures for the end of Year 3.

The entity sponsors a leveraged employee stock ownership plan that covers all U.S. **employees** who work 20 or more hours per week. The entity makes annual contributions to the employee stock ownership plan equal to the employee stock ownership plan's debt service less dividends received by the employee stock ownership plan. All dividends received by the employee stock ownership plan are used to pay debt service. The employee stock ownership plan shares initially were pledged as collateral for its debt. As the debt is repaid, shares are released from collateral and allocated to active employees, based on the proportion of debt service paid in the year. The entity accounts for its employee stock ownership plan in accordance with this Subtopic. Accordingly, the debt of the employee stock ownership plan is recorded as debt and the shares pledged as collateral are reported as unearned employee stock ownership plan shares in the statement of financial position. As shares are released from collateral, the entity reports compensation expense equal to the current market price of the shares, and the shares become outstanding for EPS computations. Dividends on allocated employee stock ownership plan shares are recorded as a reduction of retained earnings; dividends on unallocated employee stock ownership plan shares are recorded as a reduction of debt and accrued interest. Employee stock ownership plan compensation expense was $170,000, $195,000, and $215,000 for Years 3, 2, and 1, respectively. The employee stock ownership plan shares as of December 31 were as follows.

	Year 3	Year 2
Allocated shares	40,000	20,000
Shares released for allocation	20,000	20,000
Unreleased shares	40,000	60,000
Total employee stock ownership plan shares	100,000	100,000
Fair value of unreleased shares at December 31	$ 400,000	$ 540,000

> > > Case B: A Common-Stock Leveraged Employee Stock Ownership Plan Used to Fund the Employer's Match of a 401(k) Savings Plan with an Indirect loan

718-40-55-10 This Case illustrates a common stock leveraged employee stock ownership plan used to fund the employer's match of a 401(k) savings plan with an indirect loan. On January 1, Year 1, Entity B established an employee stock ownership plan to fund the employer's match of its savings plan. All of the assumptions are the same as those outlined in Case A for Entity A, except as follows:

a. Entity B loaned its employee stock ownership plan $1,000,000 and concurrently obtained a related loan. The terms of both lending arrangements are the same as for Case A's outside loan.

b. Entity B uses shares released by the employee stock ownership plan to satisfy its matching obligation of 50 percent of voluntary employee contributions to the savings plan. The average fair value of the shares for each year is used to determine the number of shares necessary to satisfy the matching obligation.

c. If the fair value of the shares released is less than Entity B's matching obligation, Entity B contributes additional newly issued shares to the employee stock ownership plan to satisfy the remaining obligation.

d. Shares used to replace dividends on allocated shares used to service debt do not count toward the employer's match.

e. The employee contributions, required employer match, and the number of shares needed to fund the employee match follow.

Year	Employee Contributions	Employer Match	Number of Shares
1	$ 400,000	$ 200,000	18,605
2	410,000	205,000	20,000
3	420,000	210,000	22,105
4	430,000	215,000	19,545
5	440,000	220,000	16,667

Note that the number of shares needed to satisfy the employer's matching obligation is determined by dividing the matching obligation by the average fair value of a share of common stock (for Year 1: $200,000 divided by $10.75 [see above table for average fair values] equals 18,605 shares).

718-40-55-11 The 20,000 shares released each year based on debt service payments follow.

Year	Number of Shares Needed to Settle 401(k) Liability	Total Employee Stock Ownership Plan Shares Released	Employee Stock Ownership Plan Shares Used for Dividends	Employee Stock Ownership Plan Shares Available to Settle 401(k) Liability	Compensation (Additional Shares)	Top-Up (Additional Shares)
Notes	(1)	(2)	(3)	(4)	(5)	(6)
1	18,605	20,000	0	20,000	1,395	0
2	20,000	20,000	976	19,024	0	976
3	22,105	20,000	2,105	17,895	0	4,210
4	19,545	20,000	2,727	17,273	0	2,272
5	16,667	20,000	3,030	16,970	303	0

Notes:

(1) See the table in (e) of the preceding paragraph.

(2) See assumptions.

(3) See the table in paragraph 718-40-55-4(i).

(4) Total employee stock ownership plan shares released minus employee stock ownership plan shares used for dividends.

(5) If the employee stock ownership plan shares needed to settle the 401(k) liability (column 1) are less than the employee stock ownership plan shares available to settle the liability (column 4), then the remaining shares are considered compensation (this is the case in Years 1 and 5).

(6) If the employee stock ownership plan shares needed to settle the 401(k) liability (column 1) are greater than the employee stock ownership plan shares available to settle the liability (column 4), then the shortfall must be made up by the employer in the form of top-up shares (this is the case in Years 2, 3, and 4).

718-40-55-12 Cumulative share amounts follow.

Year	Cumulative Number of Shares Released	Cumulative Number of Shares Allocated	Total Suspense Shares
1	20,000	0	80,000
2	40,976	20,000	60,000
3	65,186	40,976	40,000
4	87,458	65,186	20,000
5	107,458	87,458	0

718-40-55-13 Note that dividends on **top-up shares** are paid in cash. Cumulative shares released include top-up shares.

718-40-55-14 The following table sets forth Entity B's employee stock ownership plan related information. All amounts represent changes (credits in parentheses) in account balances.

Year	Principal	Unearned Employee Stock Ownership Plan Shares	Paid-In Capital	Dividends	Interest Expense	Compensation Expense Employee Stock Ownership Plan	Compensation Expense Top-Up	Cash
Notes	(1)	(2)	(3)	(4)	(1)	(5)	(6)	(7)
1	$ 163,800	$ (200,000)	$(15,000)	$ -	$ 100,000	$ 215,000	$ -	$(263,800)
2	180,200	(200,000)	(15,000)	10,000	83,600	195,000	10,000	(263,800)
3	198,200	(200,000)	(30,000)	20,500	65,600	170,000	40,000	(264,300)
4	218,000	(200,000)	(45,000)	32,600	45,800	190,000	25,000	(266,400)
5	239,800	(200,000)	(64,000)	43,700	24,000	224,000	-	(267,500)
Total	$ 1,000,000	$ (1,000,000)	$(169,000)	$ 106,800	$ 319,000	$ 994,000	$ 75,000	$ (1,325,800)

Notes:

(1) See the table in paragraph 718-40-55-4(h).

(2) Number of shares released during the year (20,000) multiplied by the cost per share to employee stock ownership plan ($10).

(3) Number of shares released during the year (20,000) multiplied by the difference between average fair value per share (see the table in paragraph 718-40-55-4[f]) and cost per share to the employee stock ownership plan ($10) plus the additional paid-in capital that arises from the top-up shares contributed, which equals the compensation expense related to the top-up.

(4) Cumulative shares allocated (see the table in paragraph 718-40-55-12) multiplied by the dividend per share ($.50).

(5) Number of employee stock ownership plan shares released for direct compensation plus number of shares released related to employer's match of 401(k) (see the table in paragraph 718-40-55-11) multiplied by the average fair value per share (see the table in paragraph 718-40-55-4[f]).

(6) Additional shares contributed (top-up) to satisfy the 401(k) obligation (see the table in paragraph 718-40-55-11) multiplied by the fair value of shares contributed.

(7) The cash disbursed to the employee stock ownership plan each year is composed of $213,800 contribution; $50,000 in dividends on original employee stock ownership plan shares; and dividends on top-up shares of $500 in Year 3, $2,600 in Year 4, and $3,700 in Year 5.

718-40-55-15 Entity B would record journal entries from inception through Year 2 as follows.

January 1, Year 1 (inception)

Cash	$1,000,000	
Debt		$1,000,000
[To record loan]		
Unearned employee stock ownership plan shares (equity)	1,000,000	
Common stock and additional paid-in capital		1,000,000
[To record the issuance of 100,000 shares to the employee stock ownership plan at $10 per share]		

Year 1

Interest expense	$100,000	
Accrued interest payable		$100,000
[To record interest expense]		
Accrued interest payable	100,000	
Debt	163,800	
Cash		263,800
[To record debt payment (The cash disbursement of $263,800 consists of $50,000 in dividends, none of which was charged to retained earnings in Year 1, and $213,800 supplemental cash contribution to the employee stock ownership plan)]		
Compensation expense	200,000	
401(k) liability		200,000
[To record cost and liability related to employer's 401(k) match, which represents 50 percent of employee contributions]		
401(k) liability	200,000	
Compensation expense	15,000	
Unearned employee stock ownership plan shares		200,000
Paid-in capital		15,000
[To record release of 20,000 shares at an average fair value of $10.75 per share, 18,605 shares are used to satisfy 401(k) liability and the remaining 1,395 are used to compensate participants directly (shares cost employee stock ownership plan $10 per share)]		
Deferred tax asset	14,480	
Provision for income taxes	600,000	
Income taxes payable		614,480
[To record income taxes for Year 1 (See paragraphs 718-40-55-4 through 55-9 for detailed tax computation)]		

Year 2

Interest expense	$83,600	
Accrued interest payable		$83,600
[To record interest expense]		
Accrued interest payable	83,600	
Debt	180,200	
Cash		263,800
[To record debt payment (The cash disbursement of $263,800 consists of $50,000 in dividends, $10,000 of which was charged to retained earnings in year 2, and $213,800 supplemental cash contribution to the employee stock ownership plan)]		
Compensation expense	205,000	
401(k) liability		205,000
[To record cost and liability related to employer's 401(k) match, which represents 50 percent of employee contributions]		
Retained earnings	10,000	
Dividends payable		10,000
[To record declaration of $.50 per share dividend on the 20,000 allocated shares]		
401(k) liability	205,000	
Dividends payable	10,000	
Unearned employee stock ownership plan shares		200,000
Common stock/paid-in capital		15,000
[To record release of 20,000 shares plus contribution of an additional 976 shares to the employee stock ownership plan at an average fair value of $10.25 per share, 20,000 shares are used to satisfy 401(k) liability and the remaining 976 shares are used to replace dividends on allocated shares used for debt service (shares cost employee stock ownership plan $10 per share)]		
Deferred tax asset	7,920	
Provision for income taxes	642,560	
Income taxes payable		650,480
[To record income taxes for Year 2 (see paragraphs 718-40-55-4 through 55-9 for detailed tax computation)]		

718-40-55-16 Note that the journal entry differs from Case A because Entity B receives an additional $10,000 deduction ($4,000 tax benefit) for the 976 top-up shares.

718-40-55-17 Assuming Entity B terminated its employee stock ownership plan at the end of Year 4 (when the fair value of the suspense shares is $240,000, the unearned employee stock ownership plan shares balance is $200,000, and the unpaid debt balance is $239,800), and assuming the employer buys back the suspense shares in an amount equal to the debt balance, there will be 17 suspense shares left, which must be allocated to participants. (In this Case the shares are used to partially satisfy the employer's 401(k) matching obligation.) Entity B would make the following journal entry.

Treasury stock	$ 39,800	
401(k) liability	204	
Additional paid-in-capital		$ 40,004
Unearned employee stock ownership plan shares		200,000
[To record repurchase of employee stock ownership plan suspense shares and termination of the plan]		
Debt	239,800	
Cash		239,800
[To record repayment of the employee stock ownership plan's loan]		

718-40-55-18 In this Case, Entity B's taxes would be computed the same way as Case A. For Entity B the average number of employee stock ownership plan shares outstanding would be as follows.

Year	Employee Stock Ownership Plan Shares Outstanding
1	10,000
2	30,488
3	53,081
4	76,322
5	97,458

718-40-55-19 This represents the cumulative numbers of shares released at the beginning of the year plus the end of the year (see the table in the preceding paragraph) divided by 2.

718-40-55-20 The entity would provide the following disclosures for the end of Year 3.

The entity sponsors a 401(k) savings plan under which eligible U.S. employees may choose to save up to 6 percent of salary income on a pretax basis, subject to certain Internal Revenue Service (IRS) limits. The entity matches 50 percent of employee contributions with entity common stock. The shares for this purpose are provided principally by the entity's employee stock ownership plan, supplemented as needed by newly issued shares. The entity makes annual contributions to the employee stock ownership plan equal to the employee stock ownership plan's debt service less dividends received by the employee stock ownership plan. All dividends received by the employee stock ownership plan are used to pay debt service. The employee stock ownership plan shares initially were pledged as collateral for its debt. As the debt is repaid, shares are released from collateral and allocated to employees who made 401(k) contributions that year, based on the proportion of debt service paid in the year. The entity accounts for its employee stock ownership plan in accordance with this Subtopic. Accordingly, the shares pledged as collateral are reported as unearned employee stock ownership plan shares in the statement of financial position. As shares are released from collateral, the entity reports compensation expense equal to the current market price of the shares, and the shares become outstanding for EPS computations. Dividends on allocated employee stock ownership plan shares are recorded as a reduction of retained earnings; dividends on unallocated employee stock ownership plan shares are recorded as a reduction of debt and accrued interest.

Compensation expense for the 401(k) match and the employee stock ownership plan was $210,000, $205,000, and $215,000 for Years 3, 2, and 1, respectively. The employee stock ownership plan shares as of December 31 were as follows.

	Year 3	Year 2
Allocated shares	40,976	20,000
Shares released for allocation	24,210	20,976
Unreleased shares	40,000	60,000
Total employee stock ownership plan shares	105,186	100,976
Fair value of unreleased shares at December 31	$400,000	$540,000

> > > Case C: A Convertible-Preferred-Stock Leveraged Employee Stock Ownership Plan with a Direct Loan

718-40-55-21 This Case illustrates a convertible preferred stock leveraged employee stock ownership plan with a direct loan. On January 1, Year 1, Entity D established an employee stock ownership plan with convertible preferred stock. The assumptions are as follows:

a. The borrowing, debt service, earnings, and tax assumptions are the same as those for Entity A outlined in Case A.

b. On January 1, Year 1, the employee stock ownership plan used the proceeds of the debt to buy 80,000 shares of newly issued convertible preferred stock of Entity D for $12.50 per share.

c. The preferred stock pays dividends quarterly at an annual rate of $1.25 per share ($100,000 each year for the employee stock ownership plan shares). Accordingly, in this Case the average fair value of the shares is used to determine the number of shares used to satisfy the employer's obligation to replace dividends on allocated shares used for debt service.

d. All dividends on employee stock ownership plan shares are used for debt service.

e. The preferred stock is convertible into common stock at 1:1 ratio.

f. Participants may not withdraw the convertible preferred stock from the employee stock ownership plan. When participants become eligible to withdraw shares from their account, they must either convert to common stock or redeem the preferred shares.

g. The preferred stock has a guaranteed minimum redemption value of $12.50 per share, to be paid in shares of common stock.

h. The preferred stock is callable at $13.00 per share.

i. There is one vote per preferred share.

j. The year-end and average fair values of a share of preferred stock (fair value is assumed to be greater than or equal to minimum value) follow.

Year	Year-End	Average
1	$ 12.50	$ 12.50
2	12.50	12.50
3	12.50	12.50
4	12.50	12.50
5	14.40	13.20

718-40-55-22 The shares released each year follow.

Year	Dividends	Compensation	Total Released	Total Allocated
1	0	16,000	16,000	0
2	1,600	14,400	16,000	16,000
3	3,200	12,800	16,000	16,000
4	4,800	11,200	16,000	16,000
5	6,061	9,939	16,000	16,000

718-40-55-23 Note that the number of shares released for dividends is determined by dividing the amount of dividends on allocated shares (16,000 multiplied by $1.25 in Year 2; 32,000 multiplied by $1.25 in Year 3; and so forth) by the average fair value of a share of preferred stock ($12.50 in Years 2 and 3). In this illustration the remaining shares are released for compensation (16,000 less 1,600 in Year 2, 16,000 less 3,200 in Year 3, and so forth).

718-40-55-24 Additional share information follows.

Year	Cumulative Number of Shares Released	Cumulative Number of Shares Allocated	Year-End Suspense Shares
1	16,000	0	64,000
2	32,000	16,000	48,000
3	48,000	32,000	32,000
4	64,000	48,000	16,000
5	80,000	64,000	0

718-40-55-25 The following chart sets forth Entity D's employee stock ownership plan related information. All amounts represent changes (credits in parentheses) in account balances.

Year	Principal	Unearned Employee Stock Ownership Plan Shares	Paid-In Capital	Dividends	Interest Expense	Compensation Expense	Cash
Notes	(1)	(2)	(3)	(4)	(1)	(5)	(6)
1	$ 163,800	$ (200,000)	$ -	$ -	$100,000	$ 200,000	$ (263,800)
2	180,200	(200,000)	-	20,000	83,600	180,000	(263,800)
3	198,200	(200,000)	-	40,000	65,600	160,000	(263,800)
4	218,000	(200,000)	-	60,000	45,800	140,000	(263,800)
5	239,800	(200,000)	(11,200)	80,000	24,000	131,200	(263,800)
Total	$1,000,000	$ (1,000,000)	$(11,200)	$200,000	$319,000	$ 881,200	$(1,319,000)

Notes:

(1) See the table in paragraph 718-40-55-4(h).

(2) Total number of shares released during the year (16,000) multiplied by the cost per share to employee stock ownership plan ($12.50).

(3) Total number of shares released during the year (16,000) multiplied by the difference between average fair value per share at the release date (see the table in paragraph 718-40-55-21[j]) and cost-per-share to the employee stock ownership plan ($12.50).

(4) Cumulative shares allocated (see the table in the preceding paragraph) multiplied by the dividend per share ($1.25).

(5) Total number of employee stock ownership plan shares released for compensation (see the table in paragraph 718-40-55-22) multiplied by the average fair value per share to employee stock ownership plan (see the table in paragraph 718-40-55-21[j]).

(6) The cash disbursed each year is composed of $163,800 in contributions and $100,000 in dividends.

718-40-55-26 The journal entries to reflect the accounting for Entity D's employee stock ownership plan from inception through Year 2 are as follows.

Cash	$1,000,000	
Debt		$1,000,000
[To record the employee stock ownership plan's loan]		
Unearned employee stock ownership plan shares (equity)	1,000,000	
Preferred stock		1,000,000
[To record the issuance of shares to the employee stock ownership plan]		
Year 1		
Interest expense	100,000	
Accrued interest payable		100,000
[To record interest expense]		
Accrued interest payable	100,000	
Debt	163,800	
Cash		263,800
[To record debt payment (the cash disbursement of $263,800 consists of $100,000 in dividends, none of which was charged to retained earnings in Year 1, and $163,800 supplemental cash contribution to the employee stock ownership plan)]		
Compensation expense	200,000	
Unearned employee stock ownership plan shares		200,000
[To record release of 16,000 shares at an average fair value of $12.50 per share (shares cost employee stock ownership plan $12.50 per share)]		
Deferred tax asset	14,480	
Provision for income taxes	600,000	
Income taxes payable		614,480
[To record income taxes for year]		
Year 2		
Interest expense	83,600	
Accrued interest payable		83,600
[To record interest expense]		
Accrued interest payable	83,600	
Debt	180,200	
Cash		263,800
[To record debt payment (the cash disbursement of $263,800 is made up of $100,000 in dividends, $20,000 of which was charged to retained earnings in Year 2, and $163,800 supplemental cash contribution to the employee stock ownership plan)]		
Retained earnings	20,000	
Dividends payable		20,000
[To record declaration of $1.25 per share dividend on the 16,000 allocated shares]		
Compensation expense	180,000	
Dividends payable	20,000	
Unearned employee stock ownership plan shares		200,000
[To record release of 16,000 shares at an average fair value of 12.50 per share (shares cost employee stock ownership plan $12.50 per share)]		
Deferred tax asset	7,920	
Provision for income taxes	646,560	
Income taxes payable		654,480
[To record income taxes for year]		

718-40-55-27 The tax and EPS calculations for Entity D follow.

	Year				
	1	*2*	*3*	*4*	*5*
Income before employee stock ownership plan	$ 1,800,000	$ 1,900,000	$ 2,000,000	$ 2,100,000	$ 2,200,000
Interest expense	(100,000)	(83,600)	(65,600)	(45,800)	(24,000)
Compensation expense	(200,000)	(180,000)	(160,000)	(140,000)	(131,200)
Pretax income	1,500,000	1,636,400	1,774,400	1,914,200	2,044,800
Provision for income tax					
Currently payable	614,480	654,480	694,480	734,480	774,480
Deferred	(14,480)	(7,920)	(720)	7,200	15,920
Total	$ 600,000	$ 646,560	$ 693,760	$ 741,680	$ 790,400
Net income	$ 900,000	$ 989,840	$ 1,080,640	$ 1,172,520	$ 1,254,400
Preferred stock dividends	-	20,000	40,000	60,000	80,000
Earnings applicable to common stock	$ 900,000	$ 969,840	$ 1,040,640	$ 1,112,520	$ 1,174,400
Common shares outstanding	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000
Basic EPS without conversion	$ .90	$ .97	$ 1.04	$ 1.11	$ 1.17
Diluted EPS if converted	$ .89	$ .95	$ 1.01	$ 1.07	$ 1.13

718-40-55-28 If-converted computation.

	Year 1	Year 2	Year 3	Year 4	Year 5
Earnings applicable to common stock	$ 900,000	$ 969,840	$ 1,040,640	$ 1,112,520	$ 1,174,400
Add—					
Preferred dividends net of tax	-	12,000	24,000	36,000	48,000
Tax benefit on as if converted common dividend (1)	-	3,902	8,421	10,909	12,800
Less—					
Additional compensation (2)	-	(6,146)	(11,368)	(19,636)	(28,800)
Adjusted earnings	$ 900,000	$ 979,596	$ 1,061,693	$ 1,139,793	$ 1,206,400
Shares outstanding					
Non-employee stock ownership plan	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000
Employee stock ownership plan as if converted (3)	9,302	29,268	52,632	63,636	72,000
Total	1,009,302	1,029,268	1,052,632	1,063,636	1,072,000
If-converted diluted EPS	$ .89	$ .95	$ 1.01	$ 1.07	$ 1.13

718-40-55-29 Computations for (1), (2), and (3) follow.

	Year 1	Year 2	Year 3	Year 4	Year 5
(1) Allocated preferred shares	0	16,000	32,000	48,000	64,000
Conversion ratio	1:1	1:1	1:1	1:1	1:1
Redemption ratio	12.50/10.75	12.50/10.25	12.50/9.50	12.50/11.00	1:1
If converted allocated common shares	0	19,512	42,105	54,545	64,000
Dividends at $.50 per common share	$ -	$ 9,756	$ 21,053	$ 27,273	$ 32,000
Tax benefit on common dividends	$ -	$ 3,902	$ 8,421	$ 10,909	$ 12,800
(2) Preferred dividends at $1.25 per share	$ -	$ 20,000	$ 40,000	$ 60,000	$ 80,000
Dividends at $.50 per common share	$ -	(9,756)	(21,053)	(27,273)	(32,000)
Additional compensation gross	$ -	$ 10,244	$ 18,947	$ 32,727	$ 48,000
Net of tax	$ -	$ 6,146	$ 11,368	$ 19,636	$ 28,800
(3) Computation average preferred shares released	8,000	24,000	40,000	56,000	72,000
Conversion ratio	1:1	1:1	1:1	1:1	1:1
Redemption ratio	12.50/10.75	12.50/10.25	12.50/9.50	12.50/11.00	1:1
If converted average released common shares	9,302	29,268	52,632	63,636	72,000

	Year 1	Year 2	Year 3	Year 4	Year 5
Pretax income	$ 1,500,000	$ 1,636,400	$ 1,774,400	$ 1,914,200	$ 2,044,800
Tax at 40 percent (statutory rate)	$ 600,000	$ 654,560	$ 709,760	$ 765,680	$ 817,920
Benefit of employee stock ownership plan dividends	-	(8,000)	(16,000)	(24,000)	(32,000)
Effect of difference between fair value and cost of released shares	-	-	-	-	4,480
Provision as reported	$ 600,000	$ 646,560	$ 693,760	$ 741,680	$ 790,400

> > Example 2: A Convertible, Preferred-Stock, Leveraged Employee Stock Ownership Plan Used to Fund a 401(k) Savings Plan with an Employer Loan

718-40-55-30 This Example illustrates the guidance in paragraphs 718-40-25-7 through 25-17; 718-40-30-1 through 30-4; 718-40-35-1; 718-40-40-1 through 40-7; and 718-40-45-3 through 45-8 for a convertible preferred stock leveraged employee stock ownership plan used to fund a 401(k) savings plan with an **employer loan**. This Example has the following assumptions:

a. On January 1, Year 1, Entity E established a leveraged employee stock ownership plan with convertible preferred stock.

b. The employee stock ownership plan borrowed $1,000,000 from the employer at 10 percent for 5 years and used the proceeds to buy 80,000 shares of newly issued convertible preferred stock of Entity E for $12.50 per share.

c. Debt service is funded by cash contributions and dividends on employer stock held by the employee stock ownership plan.

d. Dividends on all of the original 80,000 shares held by the employee stock ownership plan are used for debt service.

e. Cash contributions are made at the end of each year.

f. The preferred stock pays dividends quarterly at an annual rate of $1.25 per share ($100,000 each year for the employee stock ownership plan's shares). Accordingly, in this Example, the average fair value of the shares is used to determine the number of shares used to satisfy the employer's obligation to replace dividends on allocated shares used for debt service.

g. The preferred stock is convertible at a 1:1 ratio into common stock.

h. Participants may not withdraw the convertible preferred stock from the employee stock ownership plan. When participants become eligible to withdraw shares from their account, they must either convert to common stock or redeem the preferred shares.

i. The preferred stock has a guaranteed minimum redemption value of $12.50 per share, to be paid in shares of common stock.

j. The preferred stock is callable at $13.00 per share.

k. There is one vote per preferred share.

l. The year-end and average fair values of a share of preferred stock (fair value is assumed to be greater than or equal to minimum value) follow.

Year	Year-End	Average
1	$ 12.50	$ 12.50
2	12.50	12.50
3	12.50	12.50
4	12.50	12.50
5	14.40	13.20

m. Entity E uses shares released by the employee stock ownership plan to satisfy its matching obligation of 50 percent of voluntary employee contributions to the savings plan. The fair value of the shares at the end of each month is used to determine the number of shares necessary to satisfy the matching obligation. (Accordingly, in this Example, average fair values are used to determine the number of shares needed to satisfy the employer's liabilities.)

n. If the fair value of the shares released is less than Entity E's matching obligation, Entity E contributes additional newly issued shares (top-up shares) to the employee stock ownership plan to satisfy the remaining obligation. The top-up shares are issued at the end of the year. Dividends on the top-up shares are paid in cash.

o. Shares that replace dividends on allocated shares used to service debt do not count toward the employer's match.

p. The employee contributions, required employer match, and the number of shares needed to fund the employee match follow.

Year	Employee Contributions	Employer Match	Number of Shares
1	$ 400,000	$200,000	16,000
2	410,000	205,000	16,400
3	420,000	210,000	16,800
4	430,000	215,000	17,200
5	440,000	220,000	16,667

Note that the number of shares needed to satisfy the employer's matching obligation is determined by dividing the matching obligation by the average fair value of a share of common stock (for Year 1: $200,000 divided by $12.50 equals 16,000 shares).

q. Principal and interest are payable in annual installments at the end of each year. Debt service is as follows.

Year	Principal	Interest	Total Debt Service
1	110,000	$ 100,000	$ 210,000
2	150,000	89,000	239,000
3	200,000	74,000	274,000
4	250,000	54,000	304,000
5	290,000	29,000	319,000
Total	$1,000,000	$346,000	$1,346,000

r. Shares are released from the suspense account for allocation to participants' accounts based on a principal-plus-interest formula. The released shares are allocated to participants' accounts at the beginning of the following year. Shares are assumed to be released ratably throughout the year.

s. The shares released each year follow.

Year	Number of Shares Needed to Satisfy 401(k) Liability	Total Released	Shares Released for Dividends	Employee Stock Ownership Plan Shares Available to Satisfy 401(k) Liability	Additional Shares (Top-Up)
1	16,000	12,481	0	12,481	3,519
2	16,400	14,205	1248	12,957	3,443
3	16,800	16,286	2669	13,617	3,183
4	17,200	18,068	4297	13,771	3,429
5	16,667	18,960	5780	13,180	3,487

Note that the number of shares released for dividends is determined by dividing the amount of dividends on allocated shares (12,481 multiplied by $1.25 in Year 2; 26,686 multiplied by $1.25 in Year 3, and so forth) by the average fair value of a share of preferred stock ($12.50 in Years 2 and 3). In this example, the remaining shares are released for compensation (14,205 less 1,248 in Year 2; 16,286 less 2,669 in Year 3, and so forth).

t. Additional share information follows.

	Initial Employee Stock Ownership Plan Shares		Top-Up Shares				
	Cumulative Shares		Cumulative Shares				
Year	Released	Allocated	Issuable	Issued	Average Shares Released or Issuable	Total Shares Allocated	Year-End Suspense Shares
1	12,481	0	3,519	0	8,000	0	67,519
2	26,686	12,481	6,962	3,519	24,824	16,000	53,314
3	42,972	26,686	10,145	6,962	43,383	33,648	37,028
4	61,040	42,972	13,574	10145	63,866	53,117	18,960
5	80,000	61,040	17,061	13574	85,838	74,614	0

u. The pre-employee stock ownership plan income, shares outstanding, and income tax assumptions are the same as for Example 1 (see paragraph 718-40-55-3).

718-40-55-31 The following chart sets forth Entity E's employee stock ownership plan related information. All amounts represent changes (credits are in parentheses) in account balances.

Year	Unearned Employee Stock Ownership Plan Shares	Paid-In Capital	Dividends—Original Shares	Dividends Top-Up Shares	Compensation Expense Employee Stock Ownership Plan	Compensation Expense Top-Up
Notes	(1)	(2)	(3)	(4)	(5)	(6)
1	$ (156,000)	$ (44,000)	$ -	$ -	$ 156,000	$ 44,000
2	(177,600)	(43,000)	15,600	4,400	162,000	43,000
3	(203,600)	(39,800)	33,400	8,700	170,200	39,800
4	(225,800)	(42,900)	53,700	12,700	172,100	42,900
5	(237,000)	(59,300)	76,300	17,000	174,000	46,000
Total	$ (1,000,000)	$ (229,000)	$ 179,000	$ 42,800	$ 834,300	$ 215,700

Notes:

(1) Total number of shares released during the year multiplied by the cost per share to employee stock ownership plan ($12.50).

(2) Total number of shares released during the year multiplied by the difference between average fair value per share at the release date (see the table in [l] of the preceding paragraph) and cost per share to the employee stock ownership plan ($12.50) plus the additional paid-in capital that arises from the top-up shares contributed, which equals the compensation expense related to the employee stock ownership plan.

(3) Cumulative shares allocated from original 80,000 shares (see the table in [t] of the preceding paragraph) multiplied by the dividend per share ($1.25).

(4) Cumulative top-up shares issued (see the table in [t] of the preceding paragraph) multiplied by the dividend per share ($1.25).

(5) Total number of employee stock ownership plan shares released for compensation (see the table in [s] of the preceding paragraph) multiplied by the average fair value per share (see the table in [l] of the preceding paragraph).

(6) Top-up shares (see the table in [s] of the preceding paragraph) multiplied by the average fair value per share (see the table in [l] of the preceding paragraph).

718-40-55-32 The journal entries to reflect the accounting for Entity E's employee stock ownership plan from inception through Year 2 are as follows.

Unearned employee stock ownership plan shares (equity)	$1,000,000	
Preferred stock		$ 1,000,000
[To record the issuance of shares to the employee stock ownership plan]		
Year 1		
Compensation expense	200,000	
401(k) liability		200,000
[To record cost and liability related to 401(k) match]		
401(k) liability	200,000	
Preferred stock		44,000
Unearned employee stock ownership plan shares		156,000
[To record release of 12,481 shares at an average fair value of $12.50 per share (shares cost employee stock ownership plan $12.50 per share) and issuance of 3,519 additional shares at $12.50 per share for top-up]		
Deferred tax asset	18,400	
Provision for income taxes	600,000	
Income tax payable		618,400
[To record income taxes for Year 1]		
Year 2		
Retained earnings	15,600	
Dividends payable		15,600
[To record declaration of $1.25 per share dividend on the 12,481 allocated shares]		
Retained earnings	4,400	
Cash		4,400
[To record declaration and payment of $1.25 per share dividend on the 3,519 issued top-up shares]		
Compensation expense	205,000	
401(k) liability		205,000
[To record cost and liability related to 401(k) match]		
401(k) liability	205,000	
Dividends payable	15,600	
Unearned employee stock ownership plan shares		177,600
Preferred stock		43,000
[To record release of 14,205 shares at an average fair value of $12.50 per share (shares cost employee stock ownership plan $12.50 per share) and issuance of 3,443 additional shares at $12.50 per share for top-up]		
Deferred tax asset	11,040	
Provision for income taxes	636,160	
Income tax payable		647,200
[To record income taxes for Year 1]		

718-40-55-33 The tax and earnings per share (EPS) computations for Entity E follow.

	Year 1	Year 2	Year 3	Year 4	Year 5
Income before employee stock ownership plan	$ 1,800,000	$ 1,900,000	$ 2,000,000	$ 2,100,000	$ 2,200,000
Interest expense	100,000	89,000	74,000	54,000	29,000
Compensation—employee stock ownership plan	156,000	162,000	170,200	172,100	174,000
Compensation—top-up	44,000	43,000	39,800	42,900	46,000
Pretax income	1,500,000	1,606,000	1,716,000	1,831,000	1,951,000
Provision for income tax					
Currently payable		647,200	674,480	701,240	734,000
Deferred	(18,400)	(11,040)	(1,440)	9,680	21,200
Total	600,000	636,160	673,040	710,000	755,200
Net income	900,000	969,840	1,042,960	1,120,080	1,195,800
Preferred stock dividends	-	20,000	42,100	66,400	93,300
Earnings applicable to common stock	$ 900,000	$ 949,840	$ 1,000,860	$ 1,053,680	$ 1,102,500
Common shares outstanding	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000
Basic EPS without conversion	$ 0.90	$ 0.95	$ 1.00	$ 1.05	$ 1.10
Diluted EPS if converted	$ 0.89	$ 0.93	$ 0.97	$ 1.01	$ 1.06

	Year 1	Year 2	Year 3	Year 4	Year 5
Earnings applicable to common shares	$ 900,000	$ 949,840	$ 1,000,860	$ 1,053,680	$ 1,102,500
Add—					
Preferred dividends net of tax	-	12,000	25,260	39,840	55,980
Tax benefit on as-if converted common dividend (1)	-	3,902	8,855	12,072	14,923
Less—					
Additional compensation (2)	-	4,795	9,481	17,579	27,468
Adjusted earnings	$ 900,000	$ 960,947	$ 1,025,494	$ 1,088,013	$ 1,145,935
Shares outstanding non-employee stock ownership plan	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000
Employee stock ownership plan as if converted (3)	9,302	30,273	57,083	72,575	85,838
Total	1,009,302	1,030,273	1,057,083	1,072,575	1,085,838
If-converted diluted EPS	$ 0.89	$ 0.93	$ 0.97	$ 1.01	$ 1.06

	Year 1	Year 2	Year 3	Year 4	Year 5
Calculation 1:					
Allocated and issued preferred shares	0	16,000	33,648	53,117	74,614
Conversion ratio	1:1	1:1	1:1	1:1	1:1
Redemption ratio	12.50/10.75	12.50/10.25	12.50/9.50	12.50/11.00	1:1
If-converted allocated and issued common shares	0	19,512	44,274	60,360	74,614
Dividends at $.50 per common share	$ -	$ 9,756	$ 22,137	$ 30,180	$ 37,307
Tax benefit on common dividends	$ -	$ 3,902	$ 8,855	$ 12,072	$ 14,923
Calculation 2:					
Allocated preferred shares (excluding top-up shares)	0	12,481	26,686	42,972	61,040
Preferred dividends at $1.25 per share	$ -	$ 15,601	$ 33,358	$ 53,715	$ 76,300
If-converted allocated common shares (excluding top-up shares)	0	15,221	35,113	$ 48,832	$ 61,040
Dividends at $.50 per common share	$ -	$ 7,610	$ 17,557	$ 24,416	$ 30,520
Additional compensation gross	$ -	$ 7,991	$ 15,801	$ 29,299	$ 45,780
Net of tax	$ -	$ 4,795	$ 9,481	$ 17,579	$ 27,468
Calculation 3:					
Average preferred shares released and issuable	8,000	24,824	43,383	63,866	85,838
If-converted average released and issuable common shares	9,302	30,273	57,083	72,575	85,838

	Year (1)	Year (2)	Year (3)	Year (4)	Year (5)
Current provision:					
Income before employee stock ownership plan	$1,800,000	$1,900,000	$2,000,000	$2,100,000	$2,200,000
Employee stock ownership plan contribution	110,000	139,000	174,000	204,000	219,000
Employee stock ownership plan dividends	100,000	100,000	100,000	100,000	100,000
Top-up contribution	44,000	43,000	39,800	42,900	46,000
Taxable income	1,546,000	1,618,000	1,686,200	1,753,100	1,835,000
Tax rate	40%	40%	40%	40%	40%
	618,400	647,200	674,480	701,240	734,000
Deferred provision:					
Reduction in unearned employee stock ownership plan shares	156,000	177,600	203,600	225,800	237,000
Related tax deduction	110,000	150,000	200,000	250,000	290,000
Difference	(46,000)	(27,600)	(3,600)	24,200	53,000
Tax rate	40%	40%	40%	40%	40%
Deferred tax expense (benefit)	(18,400)	(11,040)	(1,440)	9,680	21,200
Total provision	$ 600,000	$ 636,160	$ 673,040	$ 710,920	$ 755,200

	Year 1	Year 2	Year 3	Year 4	Year 5
Pretax income	$ 1,500,000	$ 1,606,000	$ 1,716,000	$ 1,831,000	$1,915,000
Tax at 40 percent (statutory rate)	600,000	642,400	686,400	732,400	780,400
Benefit of employee stock ownership plan dividends	-	(6,240)	(13,360)	(21,480)	(30,520)
Effect of difference between fair value and cost of released shares	-	-	-	-	5,320
Provision as reported	$ 600,000	$ 636,160	$ 673,040	$ 710,920	$ 755,200

Nonleveraged Employee Stock Ownership Plans

> Illustrations

> > Example 1: A Common Stock Nonleveraged Employee Stock Ownership Plan

718-40-55-34 This Example illustrates the guidance in paragraphs 718-40-25-2; 718-40-25-18 through 25-21; 718-40-30-5; and 718-40-45-9 for a common stock nonleveraged **employee stock ownership plan**.

718-40-55-35 This Example has the following assumptions:

a. On January 1, Year 1, Entity C established a nonleveraged employee stock ownership plan

b. Entity C contributed 10 percent of pretax profit before employee stock ownership plan related charges to the employee stock ownership plan at the end of each of Years 1 through 5; the employee stock ownership plan bought newly issued employer stock with the contribution.

c. The number of shares, earnings, tax, and other relevant assumptions are the same as those for Example 1, Case A (see paragraph 718-40-55-4).

718-40-55-36 The following chart sets forth Entity C's employee stock ownership plan-related information.

Year	Compensation Expense	Dividends	Number of Employee Stock Ownership Plan Shares Purchased	Cumulative Employee Stock Ownership Plan Shares
1	$ 180,000	$ -	15,652	15,652
2	190,000	7,830	21,111	36,763
3	200,000	18,380	20,000	56,763
4	210,000	28,380	17,500	74,263
5	220,000	37,130	15,278	89,541

718-40-55-37 The year-end market value is used in this Example to determine the number of employee stock ownership plan shares purchased. [Year 1: $180,000 divided by $11.50 (See the table in the preceding paragraph) equals 15,652]

718-40-55-38 Entity C would record journal entries for Years 1 and 2 as follows.

Year 1		
Compensation expense	$ 180,000	
Common stock and/or paid-in capital		$ 180,000
[To record contribution, sale of shares, and compensation expense]		
Provision for income taxes	648,000	
Income taxes payable		648,000
[To record income taxes at 40 percent for Year 1 on earnings of $1,620,000 ($1,800,000 pre-employee stock ownership plan income less employee stock ownership plan compensation of $180,000)]		
Year 2		
Compensation expense	190,000	
Retained Earnings	7,830	
Common stock and/or paid-in capital		190,000
Dividends payable		7,830
[To record contribution, sale of shares, declaration of dividends, and compensation expense]		
Dividends payable	7,830	
Cash		7,830
[To record payment of dividends]		
Provision for income taxes	684,000	
Income taxes payable		684,000
[To record income taxes at 40 percent for Year 2 on earnings of $1,710,000 ($1,900,000 pre-employee stock ownership plan income less employee stock ownership plan compensation of $190,000)]		

718-40-60 Relationships

General Note: The Relationships Section contains links to guidance that may be helpful to, but not required by, a user of the Subtopic. This Section may not be all-inclusive. The relationship items are organized according to the Topic structure in the Codification.

General

> Compensation—Stock Compensation

718-40-60-1 For guidance on determining the accounting for the effect of income tax factors on **employee stock ownership plans**, see paragraphs 718-740-25-6 and 718-740-45-6 through 45-7.

Pending Content:

Transition Date: *(P) December 16, 2016; (N) December 16, 2017* | **Transition Guidance: 718-10-65-4**

For guidance on determining the accounting for the effect of income tax factors on **employee stock ownership plans**, see paragraphs 718-740-25-6 and 718-740-45-5.

718-40-65 Transition and Open Effective Date Information

General Note: The Transition Section contains a description of the required transition provisions and a list of the related paragraphs that have been modified. This Section will retain the transition content during the transition period. After the transition period, the transition content will be removed yet will be available in archived versions of the Section.

General

> Transition Related to Accounting Standards Update No. 2015-10, Technical Corrections and Improvements

718-40-65-1 The following represents the transition and effective date information related to Accounting Standards Update No. 2015-10, *Technical Corrections and Improvements:*

a. The pending content that links to this paragraph shall be effective for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2015.

b. An entity shall apply the pending content that links to this paragraph prospectively.

c. An entity shall recognize and present separately the cumulative effect of the change in accounting principle of the pending content that links to this paragraph as an adjustment to the opening balance of retained earnings (or other appropriate components of equity or net assets in the statement of financial position) for the period of adoption. The cumulative-effect adjustment is the difference between the amounts recognized in the statement of financial position before initial application of the pending content that links to this paragraph and the amounts recognized in the statement of financial position at initial application of the pending content that links to this paragraph.

d. An entity shall disclose all of the following:

1. The fact that it was using a framework other than the framework in Topic 820 on fair value measurement in prior valuations
2. A qualitative description of how the valuation methodology that was used differs from that of Topic 820 and the possible effect on prior valuations
3. The nature of the change and the reason for the change of the pending content that links to this paragraph.

e. Early application for the pending content that links to this paragraph is permitted for any fiscal year or interim period for which the entity's financial statements have not yet been issued (**public business entities**) or **financial statements are available to be issued** (all other entities).

718-40-75 XBRL Elements

General Note: This section contains a list of XBRL elements that reference paragraphs in this Subtopic. For additional details regarding changes to the development version of the US GAAP Financial Reporting Taxonomy, refer to the FASB taxonomy review and comment system on the FASB web site.

Accounting Standards Update 2015-10 [Member] {0}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *AccountingStandardsUpdate201510Member*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 40 Employee Stock Ownership Plans > 65 Transition > General, 65-1

This XBRL element references the following paragraph(s)/term(s) in other Subtopic(s):

- 105 Generally Accepted Accounting Principles > 10 Overall > 65 Transition > General, 65-3

Amortization of ESOP Award {71}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *AmortizationOfESOPAward*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 40 Employee Stock Ownership Plans > 25 Recognition > Leveraged Employee Stock Ownership Plans, 25-13

Common Stock, Shares Held in Employee Trust, Shares {56}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *CommonStockSharesHeldInEmployeeTrustShares*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 40 Employee Stock Ownership Plans > 25 Recognition > Leveraged Employee Stock Ownership Plans, 25-12

Deferred Employee Stock Ownership Plan, Issuance of Shares or Sale of Treasury Shares {8}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *TreasuryStockDeferredEmployeeStockOwnershipPlan*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 40 Employee Stock Ownership Plans > 45 Other Presentation > General, 45-2

Disclosure of Compensation Related Costs, Share-based Payments [Text Block] {4303}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *DisclosureOfCompensationRelatedCostsShareBasedPaymentsTextBlock*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 40 Employee Stock Ownership Plans > 50 Disclosure > General, 50-1

This XBRL element references the following paragraph(s)/term(s) in other Subtopic(s):

- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-1
- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-2
- 718 Compensation—Stock Compensation > 10 Overall > 50 Disclosure > General, 50-4
- 718 Compensation—Stock Compensation > 10 Overall > S99 SEC Materials > General, S99-1(SAB Topic 14)

Employee Stock Ownership Plan (ESOP) Disclosures [Table Text Block] {105}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *ScheduleOfEmployeeStockOwnershipPlanESOPDisclosuresTextBlock*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 40 Employee Stock Ownership Plans > 50 Disclosure > General, 50-1

Employee Stock Ownership Plan (ESOP) Name [Axis] {170}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *EmployeeStockOwnershipPlanESOPDisclosuresByPlanAxis*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 40 Employee Stock Ownership Plans > 50 Disclosure > General, 50-1

Employee Stock Ownership Plan (ESOP), Cash Contributions to ESOP {66}
[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *EmployeeStockOwnershipPlanESOPCashContributionsToESOP*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 40 Employee Stock Ownership Plans > 50 Disclosure > General, 50-1(a)

Employee Stock Ownership Plan (ESOP), Change in Fair Value Measurement from Prior Valuations {0}
[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *EmployeeStockOwnershipPlanESOPChangeInFairValueMeasurementFromPriorValuations*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 40 Employee Stock Ownership Plans > 65 Transition > General, 65-1d(2)

Employee Stock Ownership Plan (ESOP), Classification of Dividends {0}
[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *EmployeeStockOwnershipPlanESOPClassificationOfDividends*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 40 Employee Stock Ownership Plans > 50 Disclosure > General, 50-1(b)

Employee Stock Ownership Plan (ESOP), Compensation Expense {248}
[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *EmployeeStockOwnershipPlanESOPCompensationExpense*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 40 Employee Stock Ownership Plans > 50 Disclosure > General, 50-1(c)

Employee Stock Ownership Plan (ESOP), Debt Structure, Direct Loan, Amount {42}
[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *EmployeeStockOwnershipPlanESOPDebtStructureDirectLoanAmount*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- Direct Loan
- 718 Compensation—Stock Compensation > 40 Employee Stock Ownership Plans > 25 Recognition > Leveraged Employee Stock Ownership Plans, 25-9(a)

Employee Stock Ownership Plan (ESOP), Debt Structure, Direct Loan, Description {2}
[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *EmployeeStockOwnershipPlanESOPDebtStructureDirectLoanDescription*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- Direct Loan
- 718 Compensation—Stock Compensation > 40 Employee Stock Ownership Plans > 25 Recognition > Leveraged Employee Stock Ownership Plans, 25-9(a)

Employee Stock Ownership Plan (ESOP), Debt Structure, Direct Loan, Employer Cash Payments Used for Debt Service {10}
[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *EmployeeStockOwnershipPlanESOPDebtStructureDirectLoanEmployerCashPaymentsUsedForDebtService*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 40 Employee Stock Ownership Plans > 25 Recognition > Leveraged Employee Stock Ownership Plans, 25-9(a)

Employee Stock Ownership Plan (ESOP), Debt Structure, Employer Loan, Description {2}
[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *EmployeeStockOwnershipPlanESOPDebtStructureEmployerLoanDescription*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- Employer Loan
- 718 Compensation—Stock Compensation > 40 Employee Stock Ownership Plans > 25 Recognition > Leveraged Employee Stock Ownership Plans, 25-9(d)

Employee Stock Ownership Plan (ESOP), Debt Structure, Indirect Loan, Amount {10}
[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *EmployeeStockOwnershipPlanESOPDebtStructureIndirectLoanAmount*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- Indirect Loan
- 718 Compensation—Stock Compensation > 40 Employee Stock Ownership Plans > 25 Recognition > Leveraged Employee Stock Ownership Plans, 25-9(b)

Employee Stock Ownership Plan (ESOP), Debt Structure, Indirect Loan, Description {0}
[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *EmployeeStockOwnershipPlanESOPDebtStructureIndirectLoanDescription*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- Indirect Loan
- 718 Compensation—Stock Compensation > 40 Employee Stock Ownership Plans > 25 Recognition > Leveraged Employee Stock Ownership Plans, 25-9(b)

Employee Stock Ownership Plan (ESOP), Deferred Shares {11}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *EmployeeStockOwnershipPlanESOPDeferredShares*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 40 Employee Stock Ownership Plans > 50 Disclosure > General, 50-1(d)

Employee Stock Ownership Plan (ESOP), Deferred Shares, Accounting Treatment {1}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *EmployeeStockOwnershipPlanESOPDeferredSharesAccountingTreatment*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 40 Employee Stock Ownership Plans > 30 Initial Measurement > Leveraged Employee Stock Ownership Plans, 30-2
- 718 Compensation—Stock Compensation > 40 Employee Stock Ownership Plans > 50 Disclosure > General, 50-1(b)

Employee Stock Ownership Plan (ESOP), Deferred Shares, Fair Value {79}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *EmployeeStockOwnershipPlanESOPDeferredSharesFairValue*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 40 Employee Stock Ownership Plans > 50 Disclosure > General, 50-1(e)

Employee Stock Ownership Plan (ESOP), Dividends Paid to ESOP {25}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *EmployeeStockOwnershipPlanESOPDividendsPaidToESOP*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 40 Employee Stock Ownership Plans > 50 Disclosure > General, 50-1(a)

Employee Stock Ownership Plan (ESOP), Effect of Change in Fair Value Measurement {0}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *EmployeeStockOwnershipPlanESOPEffectOfChangeinFairValueMeasurement*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 40 Employee Stock Ownership Plans > 65 Transition > General, 65-1d(3)

Employee Stock Ownership Plan (ESOP), Effect on Earnings Per Share {0}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *EmployeeStockOwnershipPlanESOPEffectOnEarningsPerShare*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 40 Employee Stock Ownership Plans > 50 Disclosure > General, 50-1(b)

Employee Stock Ownership Plan (ESOP), Fair Value of Shares Subject to Repurchase Obligation {24}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *EmployeeStockOwnershipPlanESOPFairValueOfSharesSubjectToRepurchaseObligation*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 40 Employee Stock Ownership Plans > 50 Disclosure > General, 50-1(f)

Employee Stock Ownership Plan (ESOP), Gain (Loss) on Transactions in Deferred Shares {10}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *EmployeeStockOwnershipPlanESOPGainLossOnTransactionsInDeferredShares*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 40 Employee Stock Ownership Plans > 30 Initial Measurement > Leveraged Employee Stock Ownership Plans, 30-3

Employee Stock Ownership Plan (ESOP), Interest Payments from ESOP {9}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *EmployeeStockOwnershipPlanESOPInterestPaymentsFromESOP*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 40 Employee Stock Ownership Plans > 25 Recognition > Leveraged Employee Stock Ownership Plans, 25-9(a),(b)

Employee Stock Ownership Plan (ESOP), Method of Measuring Compensation {2}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *EmployeeStockOwnershipPlanESOPMethodOfMeasuringCompensation*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 40 Employee Stock Ownership Plans > 50 Disclosure > General, 50-1(b)

Employee Stock Ownership Plan (ESOP), Number of Allocated Shares {160}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *EmployeeStockOwnershipPlanESOPNumberOfAllocatedShares*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 40 Employee Stock Ownership Plans > 50 Disclosure > General, 50-1(d)

Employee Stock Ownership Plan (ESOP), Number of Committed-to-be-Released Shares {81}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *EmployeeStockOwnershipPlanESOPNumberOfCommittedToBeReleasedShares*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 40 Employee Stock Ownership Plans > 50 Disclosure > General, 50-1(d)

Employee Stock Ownership Plan (ESOP), Number of Suspense Shares {98}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *EmployeeStockOwnershipPlanESOPNumberOfSuspenseShares*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 40 Employee Stock Ownership Plans > 50 Disclosure > General, 50-1(d)

Employee Stock Ownership Plan (ESOP), Plan Description {38}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *EmployeeStockOwnershipPlanESOPPlanDescription*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 40 Employee Stock Ownership Plans > 50 Disclosure > General, 50-1(a)

Employee Stock Ownership Plan (ESOP), Plan [Domain] {8}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *EmployeeStockOwnershipPlanESOPPlanDomain*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 40 Employee Stock Ownership Plans > 50 Disclosure > General, 50-1(a)

Employee Stock Ownership Plan (ESOP), Policy [Policy Text Block] {80}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *EmployeeStockOwnershipPlanESOPPolicy*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 40 Employee Stock Ownership Plans > 50 Disclosure > General, 50-1(b)

Employee Stock Ownership Plan (ESOP), Repurchase Obligation Amount {12}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *EmployeeStockOwnershipPlanESOPRepurchaseObligationAmount*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 40 Employee Stock Ownership Plans > 50 Disclosure > General, 50-1(f)

Employee Stock Ownership Plan (ESOP), Shares Contributed to ESOP {70}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *EmployeeStockOwnershipPlanESOPSharesContributedToESOP*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 40 Employee Stock Ownership Plans > 50 Disclosure > General, 50-1(a)

Employee Stock Ownership Plan (ESOP), Shares in ESOP {175}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *EmployeeStockOwnershipPlanESOPSharesInESOP*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 40 Employee Stock Ownership Plans > 50 Disclosure > General, 50-1(d)

Employee Stock Ownership Plan (ESOP), Tax Benefit of Dividends Paid to Plan {6}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *EmployeeStockOwnershipPlanESOPTaxBenefitOfDividendsPaidToPlan*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 40 Employee Stock Ownership Plans > 50 Disclosure > General, 50-1(g)

Employee Stock Ownership Plan (ESOP), Terms of Repurchase Obligation {0}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *EmployeeStockOwnershipPlanESOPTermsOfRepurchaseObligation*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 40 Employee Stock Ownership Plans > 50 Disclosure > General, 50-1(f)

Grandfathered ESOP Expense Recognition, Policy [Policy Text Block] {0}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *GrandfatheredESOPExpenseRecognitionPolicy*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 40 Employee Stock Ownership Plans > 50 Disclosure > General, 50-1(b)

Schedule of Employee Stock Ownership Plan (ESOP) Disclosures [Table]

Element Name: *ScheduleOfEmployeeStockOwnershipPlanESOPDisclosuresTable*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 40 Employee Stock Ownership Plans > 50 Disclosure > General, 50-1

Shares Held in Employee Stock Option Plan, Allocated {25}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *SharesHeldInEmployeeStockOptionPlanAllocated*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 40 Employee Stock Ownership Plans > 50 Disclosure > General, 50-1(d)

Shares Held in Employee Stock Option Plan, Committed-to-be-Released {16}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *SharesHeldInEmployeeStockOptionPlanCommittedToBeReleased*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 40 Employee Stock Ownership Plans > 50 Disclosure > General, 50-1(d)

Shares held in Employee Stock Option Plan, Suspense Shares {7}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *SharesHeldInEmployeeStockOptionPlanSuspenseShares*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 40 Employee Stock Ownership Plans > 50 Disclosure > General, 50-1(d)

Stock Issued During Period, Shares, Employee Stock Ownership Plan {173}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *StockIssuedDuringPeriodSharesEmployeeStockOwnershipPlan*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 40 Employee Stock Ownership Plans > 25 Recognition > Leveraged Employee Stock Ownership Plans, 25-10

This XBRL element references the following paragraph(s)/term(s) in other Subtopic(s):

- 505 Equity > 10 Overall > 50 Disclosure > General, 50-2
- 505 Equity > 10 Overall > S99 SEC Materials > General, S99-1(SX 210.3-04)

Stock Issued During Period, Value, Employee Stock Ownership Plan {129}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *StockIssuedDuringPeriodValueEmployeeStockOwnershipPlan*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 40 Employee Stock Ownership Plans > 25 Recognition > Leveraged Employee Stock Ownership Plans, 25-10

This XBRL element references the following paragraph(s)/term(s) in other Subtopic(s):

- 505 Equity > 10 Overall > 50 Disclosure > General, 50-2
- 505 Equity > 10 Overall > S99 SEC Materials > General, S99-1(SX 210.3-04)

Unearned ESOP Shares {122}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *UnearnedESOPShares*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 40 Employee Stock Ownership Plans > 45 Other Presentation > General, 45-2
- 718 Compensation—Stock Compensation > 40 Employee Stock Ownership Plans > 50 Disclosure > General, 50-1(e)

Weighted Average Number of Shares, Employee Stock Ownership Plan Shares Not Committed to be Released {51}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *WeightedAverageNumberOfSharesEmployeeStockOwnershipPlanSharesNotCommittedToBeReleased*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 40 Employee Stock Ownership Plans > 45 Other Presentation > Leveraged Employee Stock Ownership Plans, 45-3

718 Compensation—Stock Compensation
50 Employee Share Purchase Plans

718-50-05 Overview and Background

General Note: The Overview and Background Section provides overview and background material for the guidance contained in the Subtopic. It does not provide the historical background or due process. It may contain certain material that users generally consider useful to understand the typical situations addressed by the standards. The Section does not summarize the accounting and reporting requirements.

General

718-50-05-1 This Subtopic provides guidance to entities that use **employee** share purchase plans. The entity must first determine whether the plan is compensatory or noncompensatory. This is determined by the terms of the plan (see paragraphs 718-50-25-1 through 25-2). A plan with an option feature, for example a look-back feature, is considered compensatory. For a compensatory plan the calculation of the amount of the compensation is important (see Section 718-50-55).

718-50-15 Scope and Scope Exceptions

General Note: The Scope and Scope Exceptions Section outlines the items (for example, the entities, transactions, instruments, or events) to which the guidance in the Subtopic does or does not apply. In some cases, the Section may contain definitional or other text to frame the scope.

General

> Overall Guidance

718-50-15-1 This Subtopic has its own discrete scope, which is separate and distinct from the pervasive scope for this Topic as outlined in Section 718-10-15.

> Entities

718-50-15-2 The guidance in this Subtopic applies to all entities.

718-50-20 Glossary

General Note: The Master Glossary contains all terms identified as glossary terms throughout the Codification. Clicking on any term in the Master Glossary will display where the term is used. The Master Glossary may contain identical terms with different definitions, some of which may not be appropriate for a particular Subtopic. For any particular Subtopic, users should only use the glossary terms included in the particular Subtopic Glossary Section (Section 20).

Award
The collective noun for multiple instruments with the same terms and conditions granted at the same time either to a single employee or to a group of employees. An award may specify multiple vesting dates, referred to as graded vesting, and different parts of an award may have different expected terms. References to an award also apply to a portion of an award.

Employee
An individual over whom the grantor of a share-based compensation award exercises or has the right to exercise sufficient control to establish an employer-employee relationship based on common law as illustrated in case law and currently under U.S. Internal Revenue Service (IRS) Revenue Ruling 87-41. A reporting entity based in a foreign jurisdiction would determine whether an employee-employer relationship exists based on the pertinent laws of that jurisdiction. Accordingly, a grantee meets the definition of an employee if the grantor consistently represents that individual to be an employee under common law. The definition of an employee for payroll tax purposes under the U.S. Internal Revenue Code includes common law employees. Accordingly, a grantor that classifies a grantee potentially subject to U.S. payroll taxes as an employee also must represent that individual as an employee for payroll tax purposes (unless the grantee is a leased employee as described below). A grantee does not meet the definition of an employee solely because the grantor represents that individual as an employee for some, but not all, purposes. For example, a requirement or decision to classify a grantee as an employee for U.S. payroll tax purposes does not, by itself, indicate that the grantee is an employee because the grantee also must be an employee of the grantor under common law.

A leased individual is deemed to be an employee of the lessee if all of the following requirements are met:

a. The leased individual qualifies as a common law employee of the lessee, and the lessor is contractually required to remit payroll taxes on the compensation paid to the leased individual for the services provided to the lessee.

b. The lessor and lessee agree in writing to all of the following conditions related to the leased individual:

   1. The lessee has the exclusive right to grant stock compensation to the individual for the employee service to the lessee.

   2. The lessee has a right to hire, fire, and control the activities of the individual. (The lessor also may have that right.)

   3. The lessee has the exclusive right to determine the economic value of the services performed by the individual (including wages and the number of units and value of stock compensation granted).

   4. The individual has the ability to participate in the lessee's employee benefit plans, if any, on the same basis as other comparable employees of the lessee.

   5. The lessee agrees to and remits to the lessor funds sufficient to cover the complete compensation, including all payroll taxes, of the individual on or before a contractually agreed upon date or dates.

A nonemployee director does not satisfy this definition of employee. Nevertheless, nonemployee directors acting in their role as members of a board of directors are treated as employees if those directors were elected by the employer's shareholders or appointed to a board position that will be filled by shareholder election when the existing term expires. However, that requirement applies only to awards granted to nonemployee directors for their services as directors. Awards granted to those individuals for other services shall be accounted for as awards to nonemployees.

Fair Value
The amount at which an asset (or liability) could be bought (or incurred) or sold (or settled) in a current transaction between willing parties, that is, other than in a forced or liquidation sale.

Grant Date

The date at which an employer and an employee reach a mutual understanding of the key terms and conditions of a share-based payment award. The employer becomes contingently obligated on the grant date to issue equity instruments or transfer assets to an employee who renders the requisite service. Awards made under an arrangement that is subject to shareholder approval are not deemed to be granted until that approval is obtained unless approval is essentially a formality (or perfunctory), for example, if management and the members of the board of directors control enough votes to approve the arrangement. Similarly, individual awards that are subject to approval by the board of directors, management, or both are not deemed to be granted until all such approvals are obtained. The grant date for an award of equity instruments is the date that an employee begins to benefit from, or be adversely affected by, subsequent changes in the price of the employer's equity shares. Paragraph 718-10-25-5 provides guidance on determining the grant date. See Service Inception Date.

Modification

A change in any of the terms or conditions of a share-based payment award.

Service Inception Date

The date at which the requisite service period begins. The service inception date usually is the grant date, but the service inception date may differ from the grant date (see Example 6 [see paragraph 718-10-55-107]).

Share Option

A contract that gives the holder the right, but not the obligation, either to purchase (to call) or to sell (to put) a certain number of shares at a predetermined price for a specified period of time. Most share options granted to employees under share-based compensation arrangements are call options, but some may be put options.

Volatility

A measure of the amount by which a financial variable such as a share price has fluctuated (historical volatility) or is expected to fluctuate (expected volatility) during a period. Volatility also may be defined as a probability-weighted measure of the dispersion of returns about the mean. The volatility of a share price is the standard deviation of the continuously compounded rates of return on the share over a specified period. That is the same as the standard deviation of the differences in the natural logarithms of the stock prices plus dividends, if any, over the period. The higher the volatility, the more the returns on the shares can be expected to vary—up or down. Volatility is typically expressed in annualized terms.

718-50-25 Recognition

General Note: The Recognition Section provides guidance on the required criteria, timing, and location (within the financial statements) for recording a particular item in the financial statements. Disclosure is not recognition.

General

718-50-25-1 An employee share purchase plan that satisfies all of the following criteria does not give rise to recognizable compensation cost (that is, the plan is noncompensatory):

a. The plan satisfies either of the following conditions:

   1. The terms of the plan are no more favorable than those available to all holders of the same class of shares. Note that a transaction subject to an employee share purchase plan that involves a class of equity shares designed exclusively for and held only by current or former employees or their beneficiaries may be compensatory depending on the terms of the arrangement.

   2. Any purchase discount from the market price does not exceed the per-share amount of share issuance costs that would have been incurred to raise a significant amount of capital by a public offering. A purchase discount of 5 percent or less from the market price shall be considered to comply with this condition without further justification. A purchase discount greater than 5 percent that cannot be justified under this condition results in compensation cost for the entire amount of the discount. Note that an entity that justifies a purchase discount in excess of 5 percent shall reassess at least annually, and no later than the first share purchase offer during the fiscal year, whether it can continue to justify that discount pursuant to this paragraph.

b. Substantially all **employees** that meet limited employment qualifications may participate on an equitable basis.

c. The plan incorporates no option features, other than the following:

   1. Employees are permitted a short period of time—not exceeding 31 days—after the purchase price has been fixed to enroll in the plan.

   2. The purchase price is based solely on the market price of the shares at the date of purchase, and employees are permitted to cancel participation before the purchase date and obtain a refund of amounts previously paid (such as those paid by payroll withholdings).

718-50-25-2 A plan provision that establishes the purchase price as an amount based on the lesser of the equity share's market price at date of grant or its market price at date of purchase, commonly called a look-back plan, is an example of an option feature that causes the plan to be compensatory. Similarly, a plan in which the purchase price is based on the share's market price at date of grant and that permits a participating employee to cancel participation before the purchase date and obtain a refund of amounts previously paid contains an option feature that causes the plan to be compensatory. Section 718-50-55 provides guidance on determining whether an employee share purchase plan satisfies the criteria necessary to be considered noncompensatory.

718-50-25-3 The requisite service period for any compensation cost resulting from an employee share purchase plan is the period over which the employee participates in the plan and pays for the shares.

718-50-30 Initial Measurement

General Note: The Initial Measurement Section provides guidance on the criteria and amounts used to measure a particular item at the date of initial recognition.

General

718-50-30-1 Paragraph 718-10-30-6 states that the objective of the **fair value** measurement method is to estimate the fair value of the equity instruments, based on the share price and other measurement assumptions at the **grant date**, that are issued in exchange for **employee** services. That objective also applies to the fair value measurements associated with grants under a compensatory employee share purchase plan and is the basis for the approach described in Example 1, Case A (see paragraph 718-50-55-10).

> **Look-Back Plans**

718-50-30-2 Many employee share purchase plans with a look-back option have features in addition to or different from those of the plan described in Example 1, Case A (see paragraph 718-50-55-10). For example, some plans contain multiple purchase periods, others contain reset mechanisms, and still others allow changes in the withholding amounts or percentages after the grant date (see Example 1, Cases B through E [see paragraphs 718-50-55-22 through 55-33]).

718-50-30-3 In some circumstances, applying the measurement approaches described in this Subtopic at the grant date may not be practicable for certain types of employee share purchase plans. Paragraph 718-20-35-1 provides guidance on the measurement requirements if it is not possible to reasonably estimate fair value at the grant date.

718-50-35 Subsequent Measurement

General Note: The Subsequent Measurement Section provides guidance on an entity's subsequent measurement and subsequent recognition of an item. Situations that may result in subsequent changes to carrying amount include impairment, credit losses, fair value adjustments, depreciation and amortization, and so forth.

General

718-50-35-1 Changes in total **employee** withholdings during a purchase period that occur solely as a result of salary increases, commissions, or bonus payments are not plan modifications if they do not represent changes to the terms of the **award** that was offered by the employer and initially agreed to by the employee at the grant (or measurement) date. Under those circumstances, the only incremental compensation cost is that which results from the additional shares that may be purchased with the additional amounts withheld (using the **fair value** calculated at the **grant date**). For example, an employee may elect to participate in the plan on the grant date by requesting that 5 percent of the employee's annual salary be withheld for future purchases of stock. If the employee receives an increase in salary during the term of the award, the base salary on which the 5 percent withholding amount is applied will increase, thus increasing the total amount withheld for future share purchases. That increase in withholdings as a result of the salary increase is not considered a plan **modification** and thus only increases the total compensation cost associated with the award by the grant date fair value associated with the incremental number of shares that may be purchased with the additional withholdings during the period. The incremental number of shares that may be purchased is calculated by dividing the incremental amount withheld by the exercise price as of the grant date (for example, 85 percent of the grant date stock price).

718-50-35-2 Any decreases in the withholding amounts (or percentages) shall be disregarded for purposes of recognizing compensation cost unless the employee services that were valued at the grant date will no longer be provided to the employer due to a termination. However, no compensation cost shall be recognized for awards that an employee forfeits because of failure to satisfy a service requirement for vesting. The accounting for decreases in withholdings is consistent with the requirement in paragraph 718-10-35-3 that the total amount of compensation cost that must be recognized for an award be based on the number of instruments for which the requisite service has been rendered (that is, for which the requisite service period has been completed).

718-50-55 Implementation Guidance and Illustrations

General Note: The Implementation Guidance and Illustrations Section contains implementation guidance and illustrations that are an integral part of the Subtopic. The implementation guidance and illustrations do not address all possible variations. Users must consider carefully the actual facts and circumstances in relation to the requirements of the Subtopic.

General

> **Implementation Guidance**

718-50-55-1 This Section may contain summaries or references to specific tax code or other regulations that existed at the time that the standard was issued. The Financial Accounting Standards Board (FASB) does not monitor such code or regulations and assumes no responsibility for the current accuracy of the summaries or references. Users must evaluate such code or regulations to determine consistency of the current code or regulation with that presented.

> > **Variations on Basic Look-Back Plans**

718-50-55-2 The following are some of the more common types of **employee** share purchase plans with a look-back option that currently exist and the features that differentiate each type:

a. Type A plan—Maximum number of shares. This type of plan permits an employee to have withheld a fixed amount of dollars from the employee's salary (or a stated percentage of the employee's salary) over a one-year period to purchase stock. At the end of the one-year period, the employee may purchase stock at 85 percent of the lower of the **grant date** stock price or the exercise date stock price. If the exercise date stock price is lower than the grant date stock price, the employee may not purchase additional shares (that is, the maximum number of shares that may be purchased by an employee is established at the grant date based on the stock price at that date and the employee's elected withholdings); any excess cash is refunded to the employee. This is the basic type of employee share purchase plan shown in Example 1, Case A [see paragraph 718-50-55-10]).

b. Type B plan—Variable number of shares. This type of plan is the same as the Type A plan except that the employee may purchase as many shares as the full amount of the employee's withholdings will permit, regardless of whether the exercise date stock price is lower than the grant date stock price (see Example 1, Case B [paragraph 718-50-55-22]).

c. Type C plan—Multiple purchase periods. This type of plan permits an employee to have withheld a fixed amount of dollars from the employee's salary (or a stated percentage of the employee's salary) over a two-year period to purchase stock. At the end of each six-month period, the employee may purchase stock at 85 percent of the lower of the grant date stock price or the exercise date stock price based on the amount of dollars withheld during that period (see Example 1, Case C [paragraph 718-50-55-26]).

d. Type D plan—Multiple purchase periods with a reset mechanism. This type of plan is the same as the Type C plan except that the plan contains a reset feature if the market price of the stock at the end of any six-month purchase period is lower than the stock price at the original grant date. In that case, the plan resets so that during the next purchase period an employee may purchase stock at 85 percent of the lower of the stock price at either the beginning of the purchase period (rather than the original grant date price) or the exercise date (see Example 1, Case D [paragraph 718-50-55-28]).

e. Type E plan—Multiple purchase periods with a rollover mechanism. This type of plan is the same as the Type C plan except that the plan contains a rollover feature if the market price of the stock at the end of any six-month purchase period is lower than the stock price at the original grant date. In that case, the plan is immediately cancelled after that purchase date, and a new two-year plan is established using the then-current stock price as the base purchase price (see Example 1, Case D [paragraph 718-50-55-28])

f. Type F plan—Multiple purchase periods with semifixed withholdings. This type of plan is the same as the Type C plan except that the amount (or percentage) that the employee may elect to have withheld is not fixed and may be changed (increased or decreased) at the employee's election immediately after each six-month purchase date for purposes of all future withholdings under the plan (see Example 1, Case D [paragraph 718-50-55-28]).

g. Type G plan—Single purchase period with variable withholdings. This type of plan permits an employee to have withheld an amount of dollars from the employee's salary (or a stated percentage of the employee's salary) over a one-year period to purchase stock. That amount (or percentage) is not fixed and may be changed (increased or decreased) at the employee's election at any time during the term of the plan for purposes of all future withholdings under the plan. At the end of the one-year period, the employee may purchase stock at 85 percent of the lower of the grant date stock price or the exercise date stock price (see Example 1, Case D [paragraph 718-50-55-28]).

h. Type H plan—Multiple purchase periods with variable withholdings. This type of plan combines the characteristics of the Type C and Type G plans in that there are multiple purchase periods over the term of the plan and an employee is permitted to change (increase or decrease) withholding amounts (or percentages) at any time during the term of the plan for purposes of all future withholdings under the plan (see Example 1, Case D [paragraph 718-50-55-28]).

i. Type I plan—Single purchase period with variable withholdings and cash infusions. This type of plan is the same as the Type G plan except that an employee is permitted to remit catch-up amounts to the entity when (and if) the employee increases withholding amounts (or percentages). The objective of the cash infusion feature is to permit an employee to increase withholding amounts (or percentages) during the term of the plan and remit an amount to the entity such that, on the exercise date, it appears that the employee had participated at the new higher amount (or percentage) during the entire term of the plan (see Example 1, Case E [paragraph 718-50-55-32]).

718-50-55-3 The distinguishing characteristic between the Type A plan and the Type B plan is whether the maximum number of shares that an employee is permitted to purchase is fixed at the grant date based on the stock price at that date and the expected withholdings. Each of the remaining plans described above (Type C through Type I plans) incorporates the features of either a Type A plan or a Type B plan. The above descriptions are intended to be representative of the types of features commonly found in many existing plans. The accounting guidance in this Subtopic shall be applied to all plans with characteristics similar to those described above.

718-50-55-4 The measurement approach described in Example 1, Case A (see paragraph 718-50-55-10) was developed to illustrate how the **fair value** of an **award** under a basic type of employee share purchase plan with a look-back option could be determined at the grant date by focusing on the substance of the arrangement and valuing separately each feature of the award. Although that general technique of valuing an award as the sum of the values of its separate components applies to all types of employee share purchase plans with a look-back option, the fundamental components of an award may differ from plan to plan thus affecting the individual calculations. For example, the measurement approach described in that Case assumes that the maximum number of shares that an employee may purchase is fixed at the grant date based on the grant date stock price and the employee's elected withholdings (that is, the Type A plan described in paragraph 718-50-55-2). That approach needs to be modified to appropriately determine the fair value of awards under the other types of plans described in that paragraph, including a Type B plan, that do not fix the number of shares that an employee is permitted to purchase.

718-50-55-5 Although many employee share purchase plans with a look-back option initially limit the maximum number of shares of stock that the employee is permitted to purchase under the plan (Type A plans), other employee share purchase plans (Type B plans) do not fix the number of shares that the employee is permitted to purchase if the exercise date stock price is lower than the grant date stock price. In effect, an employee share purchase plan that does not fix the number of shares that may be purchased has guaranteed that the employee can always receive the value associated with at least 15 percent of the stock price at the grant date (the employee can receive much more than 15 percent of the grant date value of the stock if the stock appreciates during the look-back period). That provision provides the employee with the equivalent of a put option on 15 percent of the shares with an exercise price equal to the stock price at the grant date. In contrast, an employee who participates in a Type A plan is only guaranteed 15 percent of the lower of the stock price as of the grant date or the exercise date, which is the equivalent of a call option on 85 percent of the shares (as described more fully in paragraph 718-50-55-16). A participant in a Type B plan receives the equivalent of both a put option and a call option.

> Illustrations

> > Example 1: Look-Back Plans

718-50-55-6 The following Cases illustrate the guidance in paragraphs 718-50-30-1 through 30-2.

718-50-55-7 The following Cases illustrate the fundamental differences between different types of look back plans:

a. Basic look-back plans (Case A)

b. Look-back plan variable versus maximum number of shares (Case B)

c. Look-back plan with multiple purchase periods (Case C)

d. Look-back plans with reset or rollover mechanisms (Case D)

e. Look-back plans with retroactive cash infusion election (Case E).

718-50-55-8 The assumptions used for the numerical calculations in Cases B—E are not intended to be the same as those in Case A. Rather, they are independent and designed to illustrate how the component measurement approach in Case A would be modified to reflect various features of employee stock purchase plans.

718-50-55-9 This Example does not take into consideration the effect of interest forgone by the employee on the fair value of an award for which the exercise price is paid over time (for instance, through payroll withholdings). Awards for which part or all of the exercise price is paid before the exercise date are less valuable than awards for which the exercise price is paid at the exercise date, and it is appropriate to recognize that difference in applying the guidance in this Subtopic. However, for simplicity, the effect of forgone interest is not reflected in the fair value calculations in this Example.

> > > Case A: Basic Look-Back Plans

718-50-55-10 Some entities offer share options to employees under Section 423 of the U.S. Internal Revenue Code, which provides that employees will not be immediately taxed on the difference between the market price of the stock and a discounted purchase price if several requirements are met. One requirement is that the exercise price may not be less than the smaller of either:

a. 85 percent of the stock's market price when the **share option** is granted

b. 85 percent of the price at exercise.

718-50-55-11 A share option that provides the employee the choice of either option above may not have a term in excess of 27 months. Share options that provide for the more favorable of two (or more) exercise prices are referred to as look-back share options. A look-back share option with a 15 percent discount from the market price at either grant or exercise is worth more than a fixed share option to purchase stock at 85 percent of the current market price because the holder of the look-back share option is assured a benefit. If the share price rises, the holder benefits to the same extent as if the exercise price was fixed at the grant date. If the share price falls, the holder still receives the benefit of purchasing the stock at a 15 percent discount from its price at the date of exercise. An employee share purchase plan offering share options with a look-back feature would be compensatory because the look-back feature is an option feature (see paragraph 718-50-25-1).

718-50-55-12 For example, on January 1, 20X5, when its share price is $30, Entity A offers its employees the opportunity to sign up for a payroll deduction to purchase its stock at either 85 percent of the share's current price or 85 percent of the price at the end of the year when the share options expire, whichever is lower. The exercise price of the share options is the lesser of $25.50 ($30 ×.85) or 85 percent of the share price at the end of the year when the share options expire.

718-50-55-13 The look-back share option can be valued as a combination position. (This Case presents one of several existing valuation techniques for estimating the fair value of a look-back option. In accordance with this Topic, an entity shall use a valuation technique that reflects the substantive characteristics of the instrument being granted in the estimate of fair value.) In this situation, the components are as follows:

a. 0.15 of a share of nonvested stock

b. 0.85 of a 1-year share option held with an exercise price of $30.

718-50-55-14 Supporting analysis for the two components is discussed below.

718-50-55-15 Beginning with the first component, a share option with an exercise price that equals 85 percent of the value of the stock at the exercise date will always be worth 15 percent (100% – 85%) of the share price upon exercise. For a stock that pays no dividends, that share option is the equivalent of 15 percent of a share of the stock. The holder of the look-back share option will receive at least the equivalent of 0.15 of a share of stock upon exercise, regardless of the share price at that date. For example, if the share price falls to $20, the exercise price of the share option will be $17 ($20 ×.85), and the holder will benefit by $3 ($20 – $17), which is the same as receiving 0.15 of a share of stock for each share option.

718-50-55-16 If the share price upon exercise is more than $30, the holder of the look-back share option receives a benefit that is worth more than 15 percent of a share of stock. At prices of $30 or more, the holder receives a benefit for the difference between the share price upon exercise and $25.50—the exercise price of the share option (.85 × $30). If the share price is $40, the holder benefits by $14.50 ($40 – $25.50). However, the holder cannot receive both the $14.50 value of a share option with an exercise price of $25.50 and 0.15 of a share of stock. In effect, the holder gives up 0.15 of a share of stock worth $4.50 ($30 ×.15) if the share price is above $30 at exercise. The result is the same as if the exercise price of the share option was $30 ($25.50 + $4.50) and the holder of the look-back share option held 85 percent of a 1-year share option with an exercise price of $30 in addition to 0.15 of a share of stock that will be received if the share price is $30 or less upon exercise.

718-50-55-17 An option-pricing model can be used to value the 1-year share option on 0.85 of a share of stock represented by the second component. Thus, assuming that the fair value of a share option on one share of Entity A's stock on the grant date is $4, the compensation cost for the look-back option at the grant date is as follows.

0.15 of a share of nonvested stock ($30 × 0.15)	$ 4.50
Share option on 0.85 of a share of stock, exercise price of $30 ($4 × .85)	3.40
Total grant date value	$ 7.90

718-50-55-18 For a look-back option on a dividend-paying share, both the value of the nonvested stock component and the value of the share option component would be adjusted to reflect the effect of the dividends that the employee does not receive during the life of the share option. The present value of the dividends expected to be paid on the stock during the life of the share option (one year in this Case) would be deducted from the value of a share that receives dividends. One way to accomplish that is to base the value calculation on shares of stock rather than dollars by assuming that the dividends are reinvested in the stock.

718-50-55-19 For example, if Entity A pays a quarterly dividend of 0.625 percent (2.5% ÷ 4) of the current share price, 1 share of stock would grow to 1.0252 (the future value of 1 using a return of 0.625 percent for 4 periods) shares at the end of the year if all dividends are reinvested. Therefore, the present value of 1 share of stock to be received in 1 year is only 0.9754 of a share today (again applying conventional compound interest formulas compounded quarterly) if the holder does not receive the dividends paid during the year.

718-50-55-20 The value of the share option component is easier to compute; the appropriate dividend assumption is used in an option-pricing model in estimating the value of a share option on a whole share of stock. Thus, assuming the fair value of the share option is $3.60, the compensation cost for the look-back share option if Entity A pays quarterly dividends at the annual rate of 2.5 percent is as follows.

0.15 of a share of nonvested stock ($30 × 0.15 × 0.9754)	$4.39
Share option on 0.85 of a share of stock, $30 exercise price, 2.5% dividend yield ($3.60 × 0.85)	3.06
Total grant date value	$7.45

718-50-55-21 The first component, which is worth $4.39 at the grant date, is the minimum amount of benefits to the holder regardless of the price of the stock at the exercise date. The second component, worth $3.06 at the grant date, represents the additional benefit to the holder if the share price is above $30 at the exercise date.

> > > Case B: Look-Back Plan Variable versus Maximum Number of Shares

718-50-55-22 On January 1, 20X0, when its stock price is $50, Entity A offers its employees the opportunity to sign up for a payroll deduction to purchase its stock at the lower of either 85 percent of the stock's current price or 85 percent of the stock price at the end of the year when the options expire. Thus, the exercise price of the options is the lesser of $42.50 ($50x 85 percent) or 85 percent of the stock price at the end of the year when the option is exercised. Two employees each agree to have $4,250 withheld from their salaries; however, Employee A is not allowed to purchase any more shares than the $4,250 would buy on the grant date (that is, 100 shares [$4,250/$42.50]) and Employee B is permitted to buy as many shares as the $4,250 will permit under the terms of the plan. In both cases, the 15 percent purchase price discount at the grant date is worth $750 (100 shares x $50 x 15 percent). Depending on the stock price at the end of the year, the value of the 15 percent discount for each employee is as follows.

	Stock Price at the End of the Year	Number of Shares Purchased	Value of the 15 Percent Discount
Scenario 1: (a)			
Employee A (Type A plan)	$ 60	100	$ 1,750
Employee B (Type B plan)	$ 60	100	$ 1,750
Scenario 2: (b)			
Employee A (Type A plan)	$ 50	100	$ 750
Employee B (Type B plan)	$ 50	100	$ 750
Scenario 3: (c)			
Employee A (Type A plan)	$ 30	100	$ 450
Employee B (Type B plan)	$ 30	167	$ 750
Scenario 4: (d)			
Employee A (Type A plan)	$ 10	100	$ 150
Employee B (Type B plan)	$ 10	500	$ 750

(a) The purchase price in this scenario would be $42.50 ($50 × 0.85) because the stock price increased during the withholding period.
(b) The purchase price in this scenario would be $42.50 ($50 × 0.85) because the stock price at the end of the period was the same as the stock price at the beginning of the period.
(c) The purchase price in this scenario would be $25.50 ($30 × 0.85) because the stock price decreased during the withholding period.
(d) The purchase price in this scenario would be $8.50 ($10 × 0.85) because the stock price decreased during the withholding period.

718-50-55-23 As illustrated above, both awards provide the same value to the employee if the stock price at the exercise date has increased (or remained unchanged) from the grant date stock price. However, the award under the Type B plan is more valuable to the employee if the stock price at the exercise date has decreased from the grant date stock price because it guarantees that the employee always will receive at least 15 percent of the stock price at the grant date, whereas the award under the Type A plan only guarantees that the employee will receive 15 percent of the ultimate (lower) stock purchase price.

718-50-55-24 Using the component measurement approach described in Case A as the base, the additional feature associated with a Type B plan that shall be included in the fair value calculation is 15 percent of a put option on the employer's stock (valued by use of a standard option-pricing model, using the same measurement assumptions that were used to value the 85 percent of a call option). If the plan in that Case had the provisions of a Type B plan (that is, a plan that does not fix the number of shares that may be purchased), the fair value of the award would be calculated at the grant date as follows.

0.15 of a share of nonvested stock ($50 x 0.15)	$ 7.50
One-year call on 0.85 of a share of stock, exercise price of $50 ($7.56 x 0.85)	6.43
One-year put on 0.15 of a share of stock, exercise price of $50 ($4.27 x 0.15) (a)	0.64
Total grant date fair value	$14.57

(a) Other assumptions are the same as those used to value the call option; $50 stock price, an expected life of one year, expected volatility of 30 percent, risk-free interest rate of 6.8 percent, and a zero dividend yield.

With the same values the fair value of the Type A employee share purchase plan award described in Case A is determined as follows:

0.15 of a share of nonvested stock ($50 x 0.15)	$ 7.50
One-year call on 0.85 of a share of stock, exercise price of $50 ($7.56 x 0.85)	6.43
Total grant date fair value	$ 13.93

718-50-55-25 In Cases B through E, total compensation cost would be measured at the grant date based on the number of shares that can be purchased using the estimated total withholdings and market price of the stock as of the grant date, and not based on the potentially greater number of shares that may ultimately be purchased if the market price declines. In other words, assume that on January 1, 20X0, Employee A elects to have $850 withheld from his pay for the year to purchase stock. Total compensation cost for the Type B plan award to Employee A would be $291 ($14.57x 20 grant-date-based shares [$850/$42.50]). For purposes of determining the number of shares on which to measure compensation cost, the stock price as of the grant date less the discount, or $50 x 85 percent in this case, is used.

> > > Case C: Look-Back Plan with Multiple Purchase Periods

718-50-55-26 In substance, an employee share purchase plan with multiple purchase periods (a Type C plan) is a series of linked awards, similar in nature to how some view a graded vesting stock option plan. Accordingly, the fair value of an award under an employee share purchase plan with multiple purchase periods shall be determined at the grant date in the same manner as an award under a graded vesting stock option plan. Under the graded vesting approach, awards under a two-year plan with purchase periods at the end of each year would be valued as having two separate option tranches both starting on the initial grant date (using the Case A approach if the plan has the characteristics of a Type A plan or using the Case B approach if the plan has the characteristics of a Type B plan) but with different lives of 12 and 24 months, respectively. All other measurement assumptions would need to be consistent with the separate lives of each tranche.

718-50-55-27 For example, if the plan in Case A was a two-year Type C plan with purchase periods at the end of each year, the fair value of each tranche of the award would be calculated at the grant date as follows.

Tranche No. 1:		
0.15 of a share of nonvested stock ($50 × 0.15)	$	7.50
One-year call on 0.85 of a share of stock, exercise price of $50 ($7.56 × 0.85) [(a)]		6.43
Total grant date fair value of the first tranche	$	13.93
Tranche No. 2:		
0.15 of a share of nonvested stock ($50 × 0.15)	$	7.50
Two-year call on 0.85 of a share of stock, exercise price of $50 ($11.44 × 0.85) [(a)]		9.72
Total grant date fair value of the second tranche	$	17.22

(a) The other assumptions are $50 stock price, an expected life of 1 year, expected volatility of 30 percent, risk-free interest rate of 6.8 percent, and a zero dividend yield (same assumptions as in footnote [a] of the table in paragraph 718-50-55-24). To simplify the illustration, the fair value of each of the tranches is based on the same assumptions about volatility, the risk-free interest rate, and expected dividend yield. In practice, each of those assumptions would be related to the expected life of the respective tranche, which means that at least the risk-free interest rate, and perhaps all three assumptions, would differ for each tranche.

> > > Case D: Look-Back Plans with Reset or Rollover Mechanisms

718-50-55-28 The basic measurement approach described in Case C for a Type C plan also should be used to value awards under employee share purchase plans with multiple purchase periods that incorporate reset or rollover mechanisms (that is, Type D and Type E plans). The fair value of those awards initially can be determined at the grant date using the graded vesting measurement approach. However, at the date that the reset or rollover mechanism becomes effective, the terms of the award have been modified (the exercise price has been decreased and, for a grant under a Type E plan, the term of the award has been extended), which, in substance, is similar to an exchange of the original award for a new award with different terms. Share-based payment **modification** accounting (see paragraphs 718-20-35-3 through 35-9) shall be applied at the date that the reset or rollover mechanism becomes effective to determine the amount of any incremental fair value associated with the modified grant.

718-50-55-29 Likewise, although not a change to the terms of the employee share purchase plan, an election by an employee to increase withholding amounts (or percentages) for future services (Type F through Type H plans) is a modification of the terms of the award to that employee, which, in substance, is similar to an exchange of the original award for a new award with different terms. Accordingly, the fair value of an award under an employee share purchase plan with variable withholdings shall be determined at the grant date (using the Type A, Type B, or Type C measurement approach, as applicable) based on the estimated amounts (or percentages) that a participating employee initially elects to withhold under the terms of the plan. After the grant date (except as noted in paragraph 718-50-35-1), any increases in withholding amounts (or percentages) for future services shall be accounted for as a plan modification in accordance with the guidance in paragraph 718-20-35-3.

718-50-55-30 To illustrate, if the plan described in Case C allowed an employee to elect to change withholdings at the end of the first year, modification accounting would be applied at the date the employee elected to increase withholdings to determine the amount, if any, of incremental compensation cost. Assume that on January 1, 20X0, Employee A initially elected to have $850 per year withheld from his pay for each purchase period. However, at the end of Year 1 when the stock price is $60 (and assume that no other factors have changed), Employee A elects to have a total of $1,275 withheld for the second purchase period. At that date, $1,275 is equivalent to 30 shares eligible for purchase at the end of the second year ($1,275/$42.50). At the date Employee A elects to increase withholdings, modification accounting shall be applied to determine the amount of any incremental fair value associated with the modified award as follows.

Fair value of the old option (Tranche No. 2) before modification:	
0.15 of a share of nonvested stock ($60 × 0.15)	$ 9.00
One-year call on 0.85 of a share of stock, exercise price of $50 ($15.10 × 0.85)	12.84
Total fair value of each option	$ 21.84
Number of grant date shares ($850 ÷ $42.50)	× 20
Total fair value	$ 437
Fair value of the new option after modification:	
0.15 of a share of nonvested stock ($60 × 0.15)	$ 9.00
One-year call on 0.85 of a share of stock, exercise price of $50 ($15.10 × 0.85)	12.84
Total fair value of each option	$ 21.84
Number of modification date shares ($1,275 ÷ $42.50)	× 30
Total fair value	$ 655
Incremental compensation	$ 218

718-50-55-31 The incremental value is determined based on the fair value measurements at the date of the modification using the then-current stock price. To simplify the illustration, the fair value at the modification date is based on the same assumptions about **volatility**, the risk-free interest rate, and expected dividend yield as at the grant date.

> > > Case E: Look-Back Plans with Retroactive Cash Infusion Election

718-50-55-32 As with all employee share purchase plans, the objective of the measurement process for employee share purchase plans with a look-back option is to reasonably measure the fair value of the award at the grant date. Unlike Type F through Type H plans, which permit an employee to increase withholding amounts (or percentages) only prospectively, the Type I plan permits an employee to make a retroactive election to increase withholdings. Under a Type I plan, an employee may elect not to participate (or to participate at a minimal level) in the plan until just before the exercise date, thus making it difficult to determine when there truly is a mutual understanding of the terms of the award, and thus the date at which the grant occurs. For example, assume that the Type A employee share purchase plan in Case A permits an employee to remit catch-up amounts (up to a maximum aggregate withholding of 15 percent of annual salary) to Entity A at any time during the term of the plan. On January 1, 20X0, Employee A elects to participate in the plan by having $100 (0.04 percent) of her $250,000 salary withheld monthly from her pay over the year. On December 20, 20X0, when the stock price is $65, Employee A elects to remit a check to Entity A for $36,300, which, together with the $1,200 withheld during the year, represents 15 percent of her salary.

718-50-55-33 In that situation, December 20, 20X0 is the date at which Entity A and Employee A have a mutual understanding of the terms of the award in exchange for the services already rendered and Entity A becomes contingently obligated to issue equity instruments to Employee A upon the fulfillment of vesting requirements. The fair value of the entire award to Employee A is therefore measured as of December 20, 20X0.

> > Example 2: Limitations for Noncompensatory Treatment

718-50-55-34 Paragraph 718-50-25-1 stipulates the criteria that an employee share purchase plan must satisfy to be considered noncompensatory. One of those criteria specifies that substantially all employees that meet limited employment qualifications may participate on an equitable basis. Examples of limited employment qualifications might include customary employment of greater than 20 hours per week or completion of at least 6 months of service.

718-50-55-35 Another criterion is that the terms are no more favorable than those available to all holders of the same class of shares. For example, Entity A offers all full-time employees and all nonemployee shareholders the right to purchase $10,000 of its common stock at a 5 percent discount from its market price at the date of purchase, which occurs in 1 month. The arrangement is not compensatory because its terms are no more favorable than those available to all holders of the same class of shares. In contrast, assume Entity B has a dividend reinvestment program that permits shareholders of its common stock the ability to reinvest dividends by purchasing shares of its common stock at a 10 percent discount from its market price on the date that dividends are distributed and Entity B offers all full-time employees the right to purchase annually up to $10,000 of its common stock at a 10 percent discount from its market price on the date of purchase. Entity B's common stock is widely held; hence, many shareholders will not receive dividends totaling at least $10,000 during the annual period. Assuming that the 10 percent discount cannot be justified as the per-share amount of share issuance costs that would have been incurred to raise a significant amount of capital by a public offering, the arrangement is compensatory because the number of shares available to shareholders at a discount is based on the quantity of shares held and the amounts of dividends declared. Whereas, the number of shares available to employees at a discount is not dependent on shares held or declared dividends; therefore, the terms of the employee share purchase plan are more favorable than the terms available to all holders of the same class of shares. Consequently, the entire 10 percent discount to employees is compensatory. If, on the other hand, the 10 percent discount can be justified as the per-share amount of share issuance costs that would have been incurred to raise a significant amount of capital by a public offering, then the entire 10 percent discount to employees is not compensatory. If an entity justifies a purchase discount in excess of 5 percent, it would be required to reassess that discount at least annually and no later than the first share purchase offer during the fiscal year. If upon reassessment that discount is not deemed justifiable, subsequent grants using that discount would be compensatory.

718 Compensation—Stock Compensation
740 Income Taxes

718-740-00 Status

General Note: The Status Section identifies changes to this Subtopic resulting from Accounting Standards Updates. The Section provides references to the affected Codification content and links to the related Accounting Standards Updates. Nonsubstantive changes for items such as editorial, link and similar corrections are included separately in Maintenance Updates.

General

718-740-00-1 The following table identifies the changes made to this Subtopic.

Paragraph	Action	Accounting Standards Update	Date
Carryforward	Superseded	Accounting Standards Update No. 2016-09	03/30/2016
Deferred Tax Expense (or Benefit)	Amended	Accounting Standards Update No. 2015-01	01/09/2015
Excess Tax Benefits	Superseded	Accounting Standards Update No. 2016-09	03/30/2016
Measurement Date	Superseded	Accounting Standards Update No. 2016-09	03/30/2016
718-740-25-5	Amended	Accounting Standards Update No. 2016-09	03/30/2016
718-740-25-6	Amended	Accounting Standards Update No. 2016-09	03/30/2016
718-740-25-6	Amended	Accounting Standards Update No. 2015-10	06/12/2015
718-740-25-9	Superseded	Accounting Standards Update No. 2016-09	03/30/2016
718-740-25-9	Amended	Accounting Standards Update No. 2015-10	06/12/2015
718-740-25-10	Superseded	Accounting Standards Update No. 2016-09	03/30/2016
718-740-35-2	Amended	Accounting Standards Update No. 2016-09	03/30/2016
718-740-35-3	Superseded	Accounting Standards Update No. 2016-09	03/30/2016
718-740-35-5 through 35-9	Superseded	Accounting Standards Update No. 2016-09	03/30/2016
718-740-45-1 through 45-4	Superseded	Accounting Standards Update No. 2016-09	03/30/2016
718-740-45-5	Amended	Accounting Standards Update No. 2016-09	03/30/2016
718-740-45-5	Amended	Accounting Standards Update No. 2015-10	06/12/2015
718-740-45-6	Superseded	Accounting Standards Update No. 2016-09	03/30/2016
718-740-45-7	Amended	Accounting Standards Update No. 2016-09	03/30/2016
718-740-45-8	Amended	Accounting Standards Update No. 2016-09	03/30/2016
718-740-45-9 through 45-12	Superseded	Accounting Standards Update No. 2016-09	03/30/2016

718-740-05 Overview and Background

General Note: The Overview and Background Section provides overview and background material for the guidance contained in the Subtopic. It does not provide the historical background or due process. It may contain certain material that users generally consider useful to understand the typical situations addressed by the standards. The Section does not summarize the accounting and reporting requirements.

General

718-740-05-1 Topic 740 addresses the majority of tax accounting issues and differences between the financial reporting (or book) basis and tax basis of assets and liabilities (basis differences).

718-740-05-2 This Subtopic addresses the accounting for current and deferred **income taxes** that results from **share-based payment arrangements**, including **employee stock ownership plans**.

718-740-05-3 This Subtopic specifically addresses the accounting requirements that apply to the following:

a. The determination of the basis differences which result from tax deductions arising in different amounts and in different periods from compensation cost recognized in financial statements

b. The recognition of tax benefits when tax deductions differ from recognized compensation cost

c. The presentation required for income tax benefits from share-based payment arrangements.

718-740-05-4 Income tax regulations specify allowable tax deductions for instruments issued under share-based payment arrangements in determining an entity's income tax liability. For example, under tax law, allowable tax deductions may be measured as the **intrinsic value** of an instrument on a specified date. The **time value** component, if any, of the **fair value** of an instrument generally may not be tax deductible. Therefore, tax deductions may arise in different amounts and in different periods from compensation cost recognized in financial statements. Similarly, the amount of expense reported for an employee stock ownership plan during a period may differ from the amount of the related income tax deduction prescribed by income tax rules and regulations.

718-740-15 Scope and Scope Exceptions

General Note: The Scope and Scope Exceptions Section outlines the items (for example, the entities, transactions, instruments, or events) to which the guidance in the Subtopic does or does not apply. In some cases, the Section may contain definitional or other text to frame the scope.

General

> Overall Guidance

718-740-15-1 This Subtopic follows the same Scope and Scope Exceptions as outlined in the Overall Subtopic, see Section 718-10-15, with specific transaction qualifications noted below.

> Transactions

718-740-15-2 The guidance in this Subtopic applies to **share-based payment transactions** with both **employees** and nonemployees.

718-740-20 Glossary

General Note: The Master Glossary contains all terms identified as glossary terms throughout the Codification. Clicking on any term in the Master Glossary will display where the term is used. The Master Glossary may contain identical terms with different definitions, some of which may not be appropriate for a particular Subtopic. For any particular Subtopic, users should only use the glossary terms included in the particular Subtopic Glossary Section (Section 20).

Award
The collective noun for multiple instruments with the same terms and conditions granted at the same time either to a single employee or to a group of employees. An award may specify multiple vesting dates, referred to as graded vesting, and different parts of an award may have different expected terms. References to an award also apply to a portion of an award.

Carryforwards
Deductions or credits that cannot be utilized on the tax return during a year that may be carried forward to reduce taxable income or taxes payable in a future year. An operating loss carryforward is an excess of tax deductions over gross income in a year; a tax credit carryforward is the amount by which tax credits available for utilization exceed statutory limitations. Different tax jurisdictions have different rules about whether excess deductions or credits may be carried forward and the length of the carryforward period. The terms carryforward, operating loss carryforward, and tax credit carryforward refer to the amounts of those items, if any, reported in the tax return for the current year.

Deductible Temporary Difference
Temporary differences that result in deductible amounts in future years when the related asset or liability is recovered or settled, respectively. See Temporary Difference.

Deferred Tax Asset
The deferred tax consequences attributable to deductible temporary differences and carryforwards. A deferred tax asset is measured using the applicable enacted tax rate and provisions of the enacted tax law. A deferred tax asset is reduced by a valuation allowance if, based on the weight of evidence available, it is more likely than not that some portion or all of a deferred tax asset will not be realized.

Deferred Tax Expense (or Benefit)
The change during the year in an entity's deferred tax liabilities and assets. For deferred tax liabilities and assets acquired in a purchase business combination during the year, it is the change since the combination date. Income tax expense (or benefit) for the year is allocated among continuing operations, discontinued operations, extraordinary items, and items charged or credited directly to shareholders' equity.

Note: The following definition is Pending Content; see Transition Guidance in 225-20-65-1.

The change during the year in an entity's deferred tax liabilities and assets. For deferred tax liabilities and assets acquired in a purchase business combination during the year, it is the change since the combination date. Income tax expense (or benefit) for the year is allocated among continuing operations, discontinued operations, and items charged or credited directly to shareholders' equity.

Employee

An individual over whom the grantor of a share-based compensation award exercises or has the right to exercise sufficient control to establish an employer-employee relationship based on common law as illustrated in case law and currently under U.S. Internal Revenue Service (IRS) Revenue Ruling 87-41. A reporting entity based in a foreign jurisdiction would determine whether an employee-employer relationship exists based on the pertinent laws of that jurisdiction. Accordingly, a grantee meets the definition of an employee if the grantor consistently represents that individual to be an employee under common law. The definition of an employee for payroll tax purposes under the U.S. Internal Revenue Code includes common law employees. Accordingly, a grantor that classifies a grantee potentially subject to U.S. payroll taxes as an employee also must represent that individual as an employee for payroll tax purposes (unless the grantee is a leased employee as described below). A grantee does not meet the definition of an employee solely because the grantor represents that individual as an employee for some, but not all, purposes. For example, a requirement or decision to classify a grantee as an employee for U.S. payroll tax purposes does not, by itself, indicate that the grantee is an employee because the grantee also must be an employee of the grantor under common law.

A leased individual is deemed to be an employee of the lessee if all of the following requirements are met:

a. The leased individual qualifies as a common law employee of the lessee, and the lessor is contractually required to remit payroll taxes on the compensation paid to the leased individual for the services provided to the lessee.

b. The lessor and lessee agree in writing to all of the following conditions related to the leased individual:

1. The lessee has the exclusive right to grant stock compensation to the individual for the employee service to the lessee.

2. The lessee has a right to hire, fire, and control the activities of the individual. (The lessor also may have that right.)

3. The lessee has the exclusive right to determine the economic value of the services performed by the individual (including wages and the number of units and value of stock compensation granted).

4. The individual has the ability to participate in the lessee’s employee benefit plans, if any, on the same basis as other comparable employees of the lessee.

5. The lessee agrees to and remits to the lessor funds sufficient to cover the complete compensation, including all payroll taxes, of the individual on or before a contractually agreed upon date or dates.

A nonemployee director does not satisfy this definition of employee. Nevertheless, nonemployee directors acting in their role as members of a board of directors are treated as employees if those directors were elected by the employer’s shareholders or appointed to a board position that will be filled by shareholder election when the existing term expires. However, that requirement applies only to awards granted to nonemployee directors for their services as directors. Awards granted to those individuals for other services shall be accounted for as awards to nonemployees.

Employee Stock Ownership Plan

An employee stock ownership plan is an employee benefit plan that is described by the Employee Retirement Income Security Act of 1974 and the Internal Revenue Code of 1986 as a stock bonus plan, or combination stock bonus and money purchase pension plan, designed to invest primarily in employer stock. Also called an employee share ownership plan.

Event

A happening of consequence to an entity. The term encompasses both transactions and other events affecting an entity.

Excess Tax Benefits

The realized tax benefit related to the amount (caused by changes in the fair value of the entity’s shares after the measurement date for financial reporting) of deductible compensation cost reported on an employer’s tax return for equity instruments in excess of the compensation cost for those instruments recognized for financial reporting purposes.

Note: The following definition is Pending Content; see Transition Guidance in 718-10-65-4.

[Glossary term superseded by Accounting Standards Update No. 2016-09]

Fair Value

The amount at which an asset (or liability) could be bought (or incurred) or sold (or settled) in a current transaction between willing parties, that is, other than in a forced or liquidation sale.

Fair Value

The price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date.

Income Taxes

Domestic and foreign federal (national), state, and local (including franchise) taxes based on income.

Intrinsic Value

The amount by which the fair value of the underlying stock exceeds the exercise price of an option. For example, an option with an exercise price of $20 on a stock whose current market price is $25 has an intrinsic value of $5. (A nonvested share may be described as an option on that share with an exercise price of zero. Thus, the fair value of a share is the same as the intrinsic value of such an option on that share.)

Market Participants

Buyers and sellers in the principal (or most advantageous) market for the asset or liability that have all of the following characteristics:

a. They are independent of each other, that is, they are not related parties, although the price in a related-party transaction may be used as an input to a fair value measurement if the reporting entity has evidence that the transaction was entered into at market terms

b. They are knowledgeable, having a reasonable understanding about the asset or liability and the transaction using all available information, including information that might be obtained through due diligence efforts that are usual and customary

c. They are able to enter into a transaction for the asset or liability

d. They are willing to enter into a transaction for the asset or liability, that is, they are motivated but not forced or otherwise compelled to do so.

Measurement Date

The date at which the equity share price and other pertinent factors, such as expected volatility, that enter into measurement of the total recognized amount of compensation cost for an award of share-based payment are fixed.

Orderly Transaction

A transaction that assumes exposure to the market for a period before the measurement date to allow for marketing activities that are usual and customary for transactions involving such assets or liabilities; it is not a forced transaction (for example, a forced liquidation or distress sale).

Related Parties

Related parties include:

a. Affiliates of the entity

b. Entities for which investments in their equity securities would be required, absent the election of the fair value option under the Fair Value Option Subsection of Section 825-10-15, to be accounted for by the equity method by the investing entity

c. Trusts for the benefit of employees, such as pension and profit-sharing trusts that are managed by or under the trusteeship of management

d. Principal owners of the entity and members of their immediate families

e. Management of the entity and members of their immediate families

f. Other parties with which the entity may deal if one party controls or can significantly influence the management or operating policies of the other to an extent that one of the transacting parties might be prevented from fully pursuing its own separate interests

g. Other parties that can significantly influence the management or operating policies of the transacting parties or that have an ownership interest in one of the transacting parties and can significantly influence the other to an extent that one or more of the transacting parties might be prevented from fully pursuing its own separate interests.

Share Option

A contract that gives the holder the right, but not the obligation, either to purchase (to call) or to sell (to put) a certain number of shares at a predetermined price for a specified period of time. Most share options granted to employees under share-based compensation arrangements are call options, but some may be put options.

Share-Based Payment Arrangements

An arrangement under which either of the following conditions is met:

a. One or more suppliers of goods or services (including employees) receive awards of equity shares, equity share options, or other equity instruments.

b. The entity incurs liabilities to suppliers that meet either of the following conditions:

1. The amounts are based, at least in part, on the price of the entity's shares or other equity instruments. (The phrase at least in part is used because an award may be indexed to both the price of the entity's shares and something other than either the price of the entity's shares or a market, performance, or service condition.)

2. The awards require or may require settlement by issuance of the entity's shares.

The term shares includes various forms of ownership interest that may not take the legal form of securities (for example, partnership interests), as well as other interests, including those that are liabilities in substance but not in form. Equity shares refers only to shares that are accounted for as equity.

Also called share-based compensation arrangements.

Share-Based Payment Transactions

A transaction under a share-based payment arrangement, including a transaction in which an entity acquires goods or services because related parties or other holders of economic interests in that entity awards a share-based payment to an employee or other supplier of goods or services for the entity's benefit. Also called share-based compensation transactions.

Temporary Difference

A difference between the tax basis of an asset or liability computed pursuant to the requirements in Subtopic 740-10 for tax positions, and its reported amount in the financial statements that will result in taxable or deductible amounts in future years when the reported amount of the asset or liability is recovered or settled, respectively. Paragraph 740-10-25-20 cites eight examples of temporary differences. Some temporary differences cannot be identified with a particular asset or liability for financial reporting (see paragraphs 740-10-05-10 and 740-10-25-24 through 25-25), but those temporary differences do meet both of the following conditions:

a. Result from events that have been recognized in the financial statements

b. Will result in taxable or deductible amounts in future years based on provisions of the tax law.

Some events recognized in financial statements do not have tax consequences. Certain revenues are exempt from taxation and certain expenses are not deductible. Events that do not have tax consequences do not give rise to temporary differences.

Time Value

The portion of the fair value of an option that exceeds its intrinsic value. For example, a call option with an exercise price of $20 on a stock whose current market price is $25 has intrinsic value of $5. If the fair value of that option is $7, the time value of the option is $2 ($7 – $5).

Valuation Allowance

The portion of a deferred tax asset for which it is more likely than not that a tax benefit will not be realized.

718-740-25 Recognition

General Note: The Recognition Section provides guidance on the required criteria, timing, and location (within the financial statements) for recording a particular item in the financial statements. Disclosure is not recognition.

General

> **Determination of Temporary Differences**

718-740-25-1 This guidance addresses how **temporary differences** are recognized for **share-based payment arrangement awards** that are classified either as equity or as liabilities under the requirements of paragraphs 718-10-25-7 through 25-19. Incremental guidance is also provided for issues related to **employee stock ownership plans**.

> > Instruments Classified as Equity

718-740-25-2 The cumulative amount of compensation cost recognized for instruments classified as equity that ordinarily would result in a future tax deduction under existing tax law shall be considered to be a **deductible temporary difference** in applying the requirements of Subtopic 740-10. The deductible temporary difference shall be based on the compensation cost recognized for financial reporting purposes. Compensation cost that is capitalized as part of the cost of an asset, such as inventory, shall be considered to be part of the tax basis of that asset for financial reporting purposes.

718-740-25-3 Recognition of compensation cost for instruments that ordinarily do not result in tax deductions under existing tax law shall not be considered to result in a deductible temporary difference. A future **event** can give rise to a tax deduction for instruments that ordinarily do not result in a tax deduction. The tax effects of such an event shall be recognized only when it occurs. An example of a future event that would be recognized only when it occurs is an employee's sale of shares obtained from an award before meeting a tax law's holding period requirement, sometimes referred to as a disqualifying disposition, which results in a tax deduction not ordinarily available for such an award.

> > Instruments Classified as Liabilities

718-740-25-4 The cumulative amount of compensation cost recognized for instruments classified as liabilities that ordinarily would result in a future tax deduction under existing tax law also shall be considered to be a deductible temporary difference. The deductible temporary difference shall be based on the compensation cost recognized for financial reporting purposes.

> > Employee Stock Ownership Plans

718-740-25-5 Paragraph 740-20-45-11(d) notes that an employee stock ownership plan and a stock option plan are analogous. Both are compensatory arrangements and both sometimes result in tax deductions for amounts that are not presently recognized as compensation expense in the financial statements under existing generally accepted accounting principles (GAAP). The tax benefits of both are reported as a credit to shareholders' equity. The following guidance is therefore incremental in that it addresses elements unique to an employee stock ownership plan. See Subtopic 718-40 for the non-income-tax accounting requirements and terminology applicable to employee stock ownership plans.

Pending Content:

Transition Date: *(P) December 16, 2016; (N) December 16, 2017* | **Transition Guidance: 718-10-65-4**

The following guidance addresses elements unique to an employee stock ownership plan. See Subtopic 718-40 for the non-income-tax accounting requirements and terminology applicable to employee stock ownership plans.

718-740-25-6 For employers with leveraged employee stock ownership plans, the amount of employee stock ownership plan-related expense reported under the requirements of Subtopic 718-40 for a period may differ from the amount of the employee stock ownership plan-related income tax deduction (prescribed by income tax rules and regulations) for that period. Differences result in either of the following situations:

a. The **fair value** of shares committed to be released differs from the cost of those shares to the employee stock ownership plan.

b. The timing of expense recognition is different for income tax and financial reporting purposes.

Such differences shall be reported in accordance with the requirements of Subtopic 740-10. Similar differences arise from employee stock options. Paragraph 740-20-45-11(d) requires that the tax effects of expenses for employee stock options recognized differently for financial reporting and tax purposes be recognized in the related component of shareholders' equity.

Pending Content:

Transition Date: *(P) December 16, 2015; (N) December 16, 2015* | **Transition Guidance: 718-40-65-1**

For employers with leveraged employee stock ownership plans, the amount of employee stock ownership plan-related expense reported under the requirements of Subtopic 718-40 for a period may differ from the amount of the employee stock ownership plan-related income tax deduction (prescribed by income tax rules and regulations) for that period. Differences result in either of the following situations:

a. The **fair value** of shares committed to be released differs from the cost of those shares to the employee stock ownership plan.

b. The timing of expense recognition is different for income tax and financial reporting purposes.

Such differences shall be reported in accordance with the requirements of Subtopic 740-10. Similar differences arise from employee stock options. Paragraph 740-20-45-11(d) requires that the tax effects of expenses for employee stock options recognized differently for financial reporting and tax purposes be recognized in the related component of shareholders' equity.

Pending Content:

Transition Date: *(P) December 16, 2016; (N) December 16, 2017* | **Transition Guidance: 718-10-65-4**

For employers with leveraged employee stock ownership plans, the amount of employee stock ownership plan-related expense reported under the requirements of Subtopic 718-40 for a period may differ from the amount of the employee stock ownership plan-related income tax deduction (prescribed by income tax rules and regulations) for that period. Differences result in either of the following situations:

a. The **fair value** of shares committed to be released differs from the cost of those shares to the employee stock ownership plan.

b. The timing of expense recognition is different for income tax and financial reporting purposes.

Such differences shall be reported in accordance with the requirements of Subtopic 740-10.

718-740-25-7 Employers with nonleveraged employee stock ownership plans may accrue compensation cost for financial reporting purposes earlier than the cost is deductible for income tax purposes. Accruing the compensation cost earlier for financial reporting purposes creates a temporary difference under the requirements of Subtopic 740-10.

718-740-25-8 See Section 718-40-55 for several illustrations of the accounting for employee stock ownership plans, including the related income tax accounting.

> Tax Benefit Recognition of Excess Deductions Limited to Realized Amounts

718-740-25-9 Actual tax deductions for share-based payment arrangements may be greater than compensation cost recognized for book purposes. Sections 718-740-35 and 718-740-45 establish a methodology for measuring the part of an entity's actual tax deduction that results in **excess tax benefits** and require that such benefits be recorded as additional paid-in capital. The requirements for recognition of excess tax benefits are different from those for recognition of the benefit from the compensation cost amount recognized for book purposes.

Pending Content:

Transition Date: *(P) December 16, 2016; (N) December 16, 2017* | **Transition Guidance:** **718-10-65-4**

Editor's Note*: Paragraph 718-740-25-9 will be superseded upon transition, together with its heading:*

> **Tax Benefit Recognition of Excess Deductions Limited to Realized Amounts**

[Paragraph superseded by Accounting Standards Update No. 2016-09]

718-740-25-10 A **share option** exercise may result in a tax deduction before the actual realization of the related tax benefit because the entity, for example, has a net operating loss **carryforward**. In that situation, a tax benefit and a credit to additional paid-in capital for the excess deduction would not be recognized until that deduction reduces taxes payable.

Pending Content:

Transition Date: *(P) December 16, 2016; (N) December 16, 2017* | **Transition Guidance:** **718-10-65-4**

[Paragraph superseded by Accounting Standards Update No. 2016-09]

718-740-30 Initial Measurement

General Note: The Initial Measurement Section provides guidance on the criteria and amounts used to measure a particular item at the date of initial recognition.

General

718-740-30-1 The **deferred tax benefit (or expense)** that results from increases (or decreases) in the recognized share-based payment **temporary difference**, for example, an increase that results as additional service is rendered and the related cost is recognized or a decrease that results from forfeiture of an **award**, shall be recognized in the income statement.

718-740-30-2 Subtopic 740-10 requires a **deferred tax asset** to be evaluated for future realization and to be reduced by a **valuation allowance** if, based on the weight of the available evidence, it is more likely than not that some portion or all of the deferred tax asset will not be realized. Differences between the **deductible temporary difference** computed pursuant to paragraphs 718-740-25-2 through 25-3 and the tax deduction that would result based on the current **fair value** of the entity's shares shall not be considered in measuring the gross deferred tax asset or determining the need for a valuation allowance for a deferred tax asset recognized under these requirements.

718-740-35 Subsequent Measurement

General Note: The Subsequent Measurement Section provides guidance on an entity's subsequent measurement and subsequent recognition of an item. Situations that may result in subsequent changes to carrying amount include impairment, credit losses, fair value adjustments, depreciation and amortization, and so forth.

General

718-740-35-1 Section 718-740-30 addresses initial measurement issues related to share-based payment **temporary differences**. The requirements of that Section also apply to subsequent measurements of share-based payment temporary differences. The guidance in this Section is incremental to the guidance for initial measurement.

> Treatment of Tax Consequences When Actual Deductions Differ from Recognized Compensation Cost

718-740-35-2 This Section addresses the accounting required when actual tax deductions for compensation expense taken by an entity on its tax return for **share-based payment arrangements** differ in amounts and timing from those recorded in the financial statements. This Section establishes the methodology for identifying those amounts and specifies different treatment for excess tax deductions as compared to deficiencies in tax deductions.

Pending Content:

Transition Date: *(P) December 16, 2016; (N) December 16, 2017* | **Transition Guidance:** **718-10-65-4**

This Section addresses the accounting required in a period when actual tax deductions for compensation expense taken by an entity on its tax return for **share-based payment arrangements** differ in amounts and timing from those recorded in the financial statements. The tax effect of the difference, if any, between the cumulative compensation cost of an **award** recognized for financial reporting purposes and the deduction for an award for tax purposes shall be recognized as income tax expense or benefit in the income statement. The tax effect shall be recognized in the period in which the tax deduction arises or, in the case of an expiration of an award, in the period in which the expiration occurs. The appropriate period depends on the type of award and the incremental guidance under the requirements of Subtopic 740-270 on income taxes—interim reporting.

> > Excess Tax Benefit

718-740-35-3 If a deduction reported on a tax return for an **award** of equity instruments exceeds the cumulative compensation cost for those instruments recognized for financial reporting, any resulting realized tax benefit that exceeds the previously recognized **deferred tax asset** for those instruments is the excess tax benefit. If only a portion of an award is exercised, determination of the **excess tax benefits** shall be based on the portion of the award that is exercised.

Pending Content:

Transition Date: *(P) December 16, 2016; (N) December 16, 2017* | **Transition Guidance: 718-10-65-4**

Editor's Note*: Paragraph 718-740-35-3 will be superseded upon transition, together with its heading:*

> > **Excess Tax Benefit**

[Paragraph superseded by Accounting Standards Update No. 2016-09]

718-740-35-4 See Examples 1, Case A (paragraph 718-20-55-10); 8 (paragraph 718-20-55-71); 15, Case A (paragraph 718-20-55-123); and Example 1 (paragraph 718-30-55-1), which provide illustrations of accounting for the income tax effects of various awards.

> > Tax Deficiency

718-740-35-5 The amount deductible for an award of equity instruments on the employer's tax return may be less than the cumulative compensation cost recognized for financial reporting purposes. The write-off of a deferred tax asset related to that deficiency, net of the related **valuation allowance**, if any, shall first be offset to the extent of any remaining additional paid-in capital from excess tax benefits arising from previous awards granted, modified, or settled in cash in fiscal years beginning after December 15, 1994, and measured in accordance with a **fair value** based method of accounting.

Pending Content:

Transition Date: *(P) December 16, 2016; (N) December 16, 2017* | **Transition Guidance: 718-10-65-4**

Editor's Note*: Paragraph 718-740-35-5 will be superseded upon transition, together with its heading:*

> > **Tax Deficiency**

[Paragraph superseded by Accounting Standards Update No. 2016-09]

718-740-35-6 An entity may have continued to use a permitted **intrinsic value** method to measure and recognize share-based payment awards after 1994 when the first fair value based method of accounting and disclosure for share-based payment awards was effective. Use of an intrinsic value method before the adoption of a fair value based method for recognition purposes may have resulted in amounts actually recorded as additional paid-in capital from excess tax benefits being different from amounts that would have been recorded had such awards been recognized based on their fair values.

Pending Content:

Transition Date: *(P) December 16, 2016; (N) December 16, 2017* | **Transition Guidance: 718-10-65-4**

[Paragraph superseded by Accounting Standards Update No. 2016-09]

718-740-35-7 An entity that continued to use the intrinsic value method for measuring and recognizing awards permitted prior to the requirements of this Subtopic shall calculate the amount available for offset as the net amount of excess tax benefits that would have qualified as such had it instead adopted the fair value based method of accounting used in the entity's fair value disclosures for its intrinsic value based awards. In determining that amount, no distinction shall be made between excess tax benefits attributable to different types of equity awards, such as restricted shares or share options. An entity shall exclude from that amount excess tax benefits from share-based payment arrangements that are outside the scope of this Subtopic, excess tax benefits from **employee stock ownership plans**, and excess tax benefits that have not been realized pursuant to the requirements established in paragraph 718-740-25-10. See Examples 1, Case A (paragraph 718-20-55-10); 8 (paragraph 718-20-55-7); 15, Case A (paragraph 718-20-55-123); and Example 1 (paragraph 718-30-55-1), which provide illustrations of accounting for the income tax effects of various awards.

Pending Content:

Transition Date: *(P) December 16, 2016; (N) December 16, 2017* | **Transition Guidance: 718-10-65-4**

[Paragraph superseded by Accounting Standards Update No. 2016-09]

718-740-35-8 An alternative method for determining the amount available for offset by entities that had continued to use the intrinsic value method for measurement and recognition of awards granted, modified, or settled in cash in fiscal years beginning after December 15, 1994, was available for a limited period of time when entities were required to change to the fair value based method of accounting for **share-based payment transactions**.

Pending Content:

Transition Date: *(P) December 16, 2016; (N) December 16, 2017* | **Transition Guidance: 718-10-65-4**

[Paragraph superseded by Accounting Standards Update No. 2016-09]

718-740-35-9 Paragraph 718-740-45-4 addresses the accounting for any deficiency remaining after the offset to additional paid-in capital has exhausted any available excess tax benefits.

Pending Content:

Transition Date: *(P) December 16, 2016; (N) December 16, 2017* | **Transition Guidance: 718-10-65-4**

[Paragraph superseded by Accounting Standards Update No. 2016-09]

718-740-45 Other Presentation Matters

General Note: The Other Presentation Matters Section provides guidance on other presentation matters not addressed in the Recognition, Initial Measurement, Subsequent Measurement, and Derecognition Sections. Other presentation matters may include items such as current or long-term balance sheet classification, cash flow presentation, earnings per share matters, and so forth. The FASB Codification also contains Presentation Topics, which provide guidance for general presentation and display items. See those Topics for general guidance.

General

> Treatment of Tax Consequences When Actual Deductions Differ from Recognized Compensation Cost

718-740-45-1 This Section addresses the presentation required when actual tax deductions for compensation expense taken by an entity on its tax return for **share-based payment arrangements** differ in amounts and timing from those recorded in the financial statements.

Pending Content:

Transition Date: *(P) December 16, 2016; (N) December 16, 2017* | **Transition Guidance: 718-10-65-4**

Editor's Note*: Paragraph 718-740-45-1 will be superseded upon transition, together with its heading:*

> **Treatment of Tax Consequences When Actual Deductions Differ from Recognized Compensation Cost**

[Paragraph superseded by Accounting Standards Update No. 2016-09]

> > Excess Tax Benefit

718-740-45-2 An excess tax benefit determined pursuant to paragraph 718-740-35-3 shall be recognized as additional paid-in capital, except that an excess of a realized tax benefit for an **award** over the **deferred tax asset** for that award shall be recognized in the income statement to the extent that the excess stems from a reason other than changes in the **fair value** of an entity's shares between the **measurement date** for accounting purposes and a later measurement date for tax purposes.

Pending Content:

Transition Date: *(P) December 16, 2016; (N) December 16, 2017* | **Transition Guidance: 718-10-65-4**

Editor's Note*: Paragraph 718-740-45-2 will be superseded upon transition, together with its heading:*

> > **Excess Tax Benefit**

[Paragraph superseded by Accounting Standards Update No. 2016-09]

718-740-45-3 See paragraphs 230-10-45-14(e), 230-10-45-17(c), and 230-10-45-25(f) for requirements to treat **excess tax benefits** which have been recorded as additional paid-in capital as a financing activity on the statement of cash flows.

Pending Content:

Transition Date: *(P) December 16, 2016; (N) December 16, 2017* | **Transition Guidance: 718-10-65-4**

[Paragraph superseded by Accounting Standards Update No. 2016-09]

> > Tax Deficiency

718-740-45-4 Paragraphs 718-740-35-5 through 35-8 contain measurement guidance on how much, if any, of the write-off of a deferred tax asset from a tax deficiency shall be offset against additional paid-in capital. The remaining balance, if any, of the write-off of a deferred tax asset related to a tax deficiency shall be recognized in the income statement.

Pending Content:

Transition Date: *(P) December 16, 2016; (N) December 16, 2017* | **Transition Guidance: 718-10-65-4**

Editor's Note*: Paragraph 718-740-45-4 will be superseded upon transition, together with its heading:*

> > **Tax Deficiency**

[Paragraph superseded by Accounting Standards Update No. 2016-09]

> **Employee Stock Ownership Plans**

718-740-45-5 If the cost of shares committed to be released in an **employee stock ownership plan** is greater than their fair value, and in accordance with the requirements of paragraph 740-20-45-11(d), the employer shall credit the tax effect of the amount by which the deductible expense exceeds the book expense to shareholders' equity.

Pending Content:

Transition Date: *(P) December 16, 2015; (N) December 16, 2015* | **Transition Guidance: 718-40-65-1**

If the cost of shares committed to be released in an **employee stock ownership plan** is greater than their **fair value**, and in accordance with the requirements of paragraph 740-20-45-11(d), the employer shall credit the tax effect of the amount by which the deductible expense exceeds the book expense to shareholders' equity.

Pending Content:

Transition Date: *(P) December 16, 2016; (N) December 16, 2017* | **Transition Guidance: 718-10-65-4**

The tax effect of the difference, if any, between the cost of shares committed to be released and the **fair value** of the shares shall be recognized as income tax expense or benefit in the income statement.

718-740-45-6 Conversely, if the cost of shares committed to be released is less than their fair value, the employer shall charge the tax effect of the amount by which the book expense exceeds the deductible expense to shareholders' equity to the extent of previous credits to shareholders' equity related to cost exceeding fair value of the employee stock ownership plan shares committed to be released in previous periods.

Pending Content:

Transition Date: *(P) December 16, 2016; (N) December 16, 2017* | **Transition Guidance: 718-10-65-4**

[Paragraph superseded by Accounting Standards Update No. 2016-09]

718-740-45-7 Furthermore, the tax benefit of tax-deductible dividends on allocated employee stock ownership plan shares shall be recorded as a reduction of income tax expense allocated to continuing operations. Under the requirements of paragraph 740-20-45-11(e), the tax benefit of tax-deductible dividends on unallocated employee stock ownership plan shares that are charged to retained earnings shall be credited to shareholders' equity. However, because dividends on unallocated shares would not be charged to retained earnings under the requirements of paragraph 718-40-25-16, the tax benefit of tax-deductible dividends on unallocated employee stock ownership plan shares would not be credited to shareholders' equity.

Pending Content:

Transition Date: *(P) December 16, 2016; (N) December 16, 2017* | **Transition Guidance: 718-10-65-4**

The tax benefit of tax-deductible dividends on allocated and unallocated **employee stock ownership plan** shares shall be recognized in the income statement.

> **Tax Benefits of Dividends on Share-Based Payment Awards to Employees**

718-740-45-8 A realized income tax benefit from dividends or dividend equivalents that are charged to retained earnings and are paid to employees for any of the following equity classified awards shall be recognized as an increase to additional paid-in capital:

a. Nonvested equity shares
b. Nonvested equity share units
c. Outstanding equity share options.

Pending Content:

Transition Date: *(P) December 16, 2016; (N) December 16, 2017* | **Transition Guidance: 718-10-65-4**

An income tax benefit from dividends or dividend equivalents that are charged to retained earnings and are paid to employees for any of the following equity classified awards shall be recognized as income tax expense or benefit in the income statement:

a. Nonvested equity shares
b. Nonvested equity share units
c. Outstanding equity share options.

718-740-45-9 The amount recognized in additional paid-in capital for the realized income tax benefit from dividends on the awards identified in the preceding paragraph shall be included in the pool of excess tax benefits available to absorb tax deficiencies on share-based payment awards (as described in Section 718-740-35 and this Section).

Pending Content:

Transition Date: *(P) December 16, 2016; (N) December 16, 2017* | **Transition Guidance: 718-10-65-4**

[Paragraph superseded by Accounting Standards Update No. 2016-09]

718-740-45-10 Dividends or dividend equivalents paid to employees for the awards identified in paragraph 718-740-45-8 may result in a tax deduction prior to the actual realization of the related tax benefit because the employer, for example, has a net operating loss carryforward. Paragraph 718-740-25-10 requires the income tax benefit of those dividends not be recognized until the deduction reduces income taxes payable. Unrealized income tax benefits from dividends on equity-classified employee share-based payment awards shall be excluded from the pool of excess tax benefits available to absorb potential future tax deficiencies on share-based payment awards.

Pending Content:

Transition Date: *(P) December 16, 2016; (N) December 16, 2017* | **Transition Guidance:** **718-10-65-4**

[Paragraph superseded by Accounting Standards Update No. 2016-09]

718-740-45-11 Paragraph 718-10-55-45 requires dividends or dividend equivalents paid to employees on the portion of an award of equity shares or other equity instruments that vests be charged to retained earnings. If the related award is not expected to vest, that paragraph requires the dividends or dividend equivalents to be recognized as compensation costs. Dividends and dividend equivalents shall be reclassified between retained earnings and compensation cost in a subsequent period if the entity changes its forfeiture estimates (or actual forfeitures differ from previous estimates).

Pending Content:

Transition Date: *(P) December 16, 2016; (N) December 16, 2017* | **Transition Guidance:** **718-10-65-4**

[Paragraph superseded by Accounting Standards Update No. 2016-09]

718-740-45-12 Adjustments to additional paid-in capital for reclassifications of the tax benefits from dividends on the awards discussed in the preceding paragraph in subsequent periods increase or decrease the entity's pool of excess tax benefits available to absorb tax deficiencies by a corresponding amount. Additionally, the tax benefits from dividends that are reclassified from additional paid-in capital to the income statement (that is, as a reduction of income tax expense or an increase of income tax benefit) if an entity's estimate of forfeitures increases (or actual forfeitures exceed the entity's estimates) shall be limited to the entity's pool of excess tax benefits available to absorb tax deficiencies on the date of the reclassification.

Pending Content:

Transition Date: *(P) December 16, 2016; (N) December 16, 2017* | **Transition Guidance:** **718-10-65-4**

[Paragraph superseded by Accounting Standards Update No. 2016-09]

718-740-50 Disclosure

General Note: The Disclosure Section provides guidance regarding the disclosure in the notes to financial statements. In some cases, disclosure may relate to disclosure on the face of the financial statements.

General

718-740-50-1 [Paragraph not used]

718-740-65 Transition and Open Effective Date Information

General Note: The Transition Section contains a description of the required transition provisions and a list of the related paragraphs that have been modified. This Section will retain the transition content during the transition period. After the transition period, the transition content will be removed yet will be available in archived versions of the Section.

General

718-740-65-1 Paragraph superseded on 03/23/2010 after the end of the transition period stated in EITF Issue No. 06-11, "Accounting for Income Tax Benefits of Dividends on Share-Based Payment Awards."

718-740-75 XBRL Elements

General Note: This section contains a list of XBRL elements that reference paragraphs in this Subtopic. For additional details regarding changes to the development version of the US GAAP Financial Reporting Taxonomy, refer to the FASB taxonomy review and comment system on the FASB web site.

Adjustments to Additional Paid in Capital, Income Tax Benefit from Share-based Compensation {1243}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]

Element Name: *AdjustmentsToAdditionalPaidInCapitalTaxEffectFromShareBasedCompensation*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 740 Income Taxes > 45 Other Presentation > General, 45-2

This XBRL element references the following paragraph(s)/term(s) in other Subtopic(s):

- 505 Equity > 10 Overall > 50 Disclosure > General, 50-2
- 505 Equity > 10 Overall > S99 SEC Materials > General, S99-1(SX 210.3-04)

Deferred Federal Income Tax Expense (Benefit) {3460}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *DeferredFederalIncomeTaxExpenseBenefit*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- Deferred Tax Expense (or Benefit)

This XBRL element references the following paragraph(s)/term(s) in other Subtopic(s):

- 740 Income Taxes > 10 Overall > 50 Disclosure > General, 50-9(b)
- 740 Income Taxes > 10 Overall > S99 SEC Materials > General, S99-1(SAB Topic 6.I.7)

Deferred Foreign Income Tax Expense (Benefit) {1976}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *DeferredForeignIncomeTaxExpenseBenefit*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- Deferred Tax Expense (or Benefit)

This XBRL element references the following paragraph(s)/term(s) in other Subtopic(s):

- 740 Income Taxes > 10 Overall > 50 Disclosure > General, 50-9(b)
- 740 Income Taxes > 10 Overall > S99 SEC Materials > General, S99-1(SAB Topic 6.I.7)

Deferred Income Tax Expense (Benefit) {4351}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *DeferredIncomeTaxExpenseBenefit*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- Deferred Tax Expense (or Benefit)

This XBRL element references the following paragraph(s)/term(s) in other Subtopic(s):

- 230 Statement of Cash Flows > 10 Overall > 45 Other Presentation > General, 45-28(b)
- 740 Income Taxes > 10 Overall > 50 Disclosure > General, 50-9(b)
- 740 Income Taxes > 10 Overall > S99 SEC Materials > General, S99-1(SAB Topic 6.I.7)

Deferred Other Tax Expense (Benefit) {185}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *DeferredOtherTaxExpenseBenefit*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- Deferred Tax Expense (or Benefit)

This XBRL element references the following paragraph(s)/term(s) in other Subtopic(s):

- 740 Income Taxes > 10 Overall > 50 Disclosure > General, 50-9(g)
- 740 Income Taxes > 10 Overall > 50 Disclosure > General, 50-9(h)
- 740 Income Taxes > 10 Overall > S99 SEC Materials > General, S99-1(SAB TOPIC 6.I.7)

Deferred State and Local Income Tax Expense (Benefit) {3120}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *DeferredStateAndLocalIncomeTaxExpenseBenefit*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- Deferred Tax Expense (or Benefit)

This XBRL element references the following paragraph(s)/term(s) in other Subtopic(s):

- 740 Income Taxes > 10 Overall > 50 Disclosure > General, 50-9(b)
- 740 Income Taxes > 10 Overall > S99 SEC Materials > General, S99-1(SAB Topic 6.I.7)

Deferred Tax Assets, Gross {3985}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *DeferredTaxAssetsGross*

Deferred Tax Assets, Gross, Current {365}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *DeferredTaxAssetsGrossCurrent*

Deferred Tax Assets, Gross, Noncurrent {365}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *DeferredTaxAssetsGrossNoncurrent*

Deferred Tax Assets, Tax Credit Carryforwards {1078}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *DeferredTaxAssetsTaxCreditCarryforwards*

Deferred Tax Assets, Tax Deferred Expense {151}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *DeferredTaxAssetsTaxDeferredExpense*

Deferred Tax Assets, Tax Deferred Expense, Other {259}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *DeferredTaxAssetsTaxDeferredExpenseOther*

Employee Stock Ownership Plan (ESOP), Deferred Shares, Fair Value {79}
[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *EmployeeStockOwnershipPlanESOPDeferredSharesFairValue*

This XBRL element references the following paragraph(s)/term(s) in other Subtopic(s):

- 718 Compensation—Stock Compensation > 40 Employee Stock Ownership Plans > 50 Disclosure > General, 50-1(e)

General Business Tax Credit Carryforward [Member] {90}
[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *GeneralBusinessMember*

Income Tax Effects Allocated Directly to Equity, Employee Stock Options {64}
[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *IncomeTaxEffectsAllocatedDirectlyToEquityEmployeeStockOptions*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- 718 Compensation—Stock Compensation > 740 Income Taxes > 45 Other Presentation > General, 45-5
- 718 Compensation—Stock Compensation > 740 Income Taxes > 45 Other Presentation > General, 45-6

This XBRL element references the following paragraph(s)/term(s) in other Subtopic(s):

- 740 Income Taxes > 20 Intraperiod Tax Allocation > 45 Other Presentation > General, 45-11(d)

Research Tax Credit Carryforward [Member] {409}
[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *ResearchMember*

Stock Compensation Plan [Member] {622}
[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *StockCompensationPlanMember*

This XBRL element references the following paragraph(s)/term(s) in this Subtopic:

- Share-Based Payment Arrangements

This XBRL element references the following paragraph(s)/term(s) in other Subtopic(s):

- 718 Compensation—Stock Compensation > 10 Overall > 45 Other Presentation > General, 45-1

Summary of Tax Credit Carryforwards [Table Text Block] {115}
[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *SummaryOfTaxCreditCarryforwardsTextBlock*

Summary of Valuation Allowance [Table Text Block] {444}
[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *SummaryOfValuationAllowanceTextBlock*

Tax Credit Carryforward [Axis] {913}
[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *TaxCreditCarryforwardAxis*

Tax Credit Carryforward [Table]
Element Name: *TaxCreditCarryforwardTable*

Tax Credit Carryforward, Amount {1326}
[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *TaxCreditCarryforwardAmount*

Tax Credit Carryforward, Description {39}
[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *TaxCreditCarryforwardDescription*

Tax Credit Carryforward, Name [Domain] {2}
[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *TaxCreditCarryforwardNameDomain*

Tax Credit Carryforward, Valuation Allowance {188}
[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *TaxCreditCarryforwardValuationAllowance*

Valuation Allowance [Table]
Element Name: *ValuationAllowanceTable*

Valuation Allowance by Deferred Tax Asset [Axis] {313}

[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *ValuationAllowanceByDeferredTaxAssetAxis*

Valuation Allowance of Deferred Tax Assets [Member] {803}
[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *ValuationAllowanceOfDeferredTaxAssetsMember*

Valuation Allowance, Commentary {8}
[Label and/or reference(s) most recently revised on 06/06/2016 after the last taxonomy release.]
Element Name: *ValuationAllowanceCommentary*

718-740-S55 Implementation Guidance and Illustrations

General Note: The Implementation Guidance and Illustrations Section contains implementation guidance and illustrations that are an integral part of the Subtopic. The implementation guidance and illustrations do not address all possible variations. Users must consider carefully the actual facts and circumstances in relation to the requirements of the Subtopic.

General

> Accounting for Income Tax Effects of Share-Based Payment Arrangements Upon Adoption of Topic 718

718-740-S55-1 See paragraph 718-10-S99-1, SAB Topic 14.J, for SEC Staff views on accounting for the income tax effects of share-based payment arrangements upon adoption of Topic 718.

Hydro One - HONI Tx
December 31, 2015
Regulatory Assets and Liabilities

	HONI Tx Corp statement	TX Application (Exhibit F2, Tab 1, Schedule 3)	Difference	
	Dec2015			
Regulatory Assets				
Deferred income tax	973	-	973	Financial Accounting/ Regulatory offset account
Post-retirement and post-employment benefits	104	-	104	Financial Accounting/ Regulatory offset account
Environmental	82	-	82	Financial Accounting/ Regulatory offset account
Pension cost variance	14	14	-	
Share-based compensation	5	-	5	Financial Accounting/ Regulatory offset account
Other	1	2	(1)	FS line Includes: "Long-Term Transmission Future Corridor Acquisition and Development" + "Tax Rate Changes" - rounding difference
	1,179	**15.7**		
Less: current	5	-		
	1,174	16		
Regulatory Liabilities				
External revenue variance	87	87	-	
CDM deferral variance	53	53	-	
Deferred income tax regulatory liability	9	-	9	Financial Accounting/ Regulatory offset account
Other	6	6	-	FS line Includes: "Rights Payments" - "External Revenue – Partnership Transmission Projects Account"
	155	**146.3**		
	9			
	146			
Net	**1,024**	**(130.7)**		

Building Owners and Managers Association (BOMA) INTERROGATORY #015

Reference:

Exhibit A, Tab 6, Schedule 5, Accounting Information, Page 3

Interrogatory:

(a) Please provide a copy of the Directors' Deferred Share Unit Plan and the Long Term Incentive Plan.

(b) Please provide copies of the Accounting Order referred to in paragraphs 3.1 and 3.2.

Response:

a) For details on the Long Term Incentive Plan and the Directors’ Deferred Share Unit Plan, please refer to pages 145 and 153, respectively, of the Supplemented Long Form PREP Prospectus, which is provided as an attachment to Exhibit I, Tab 9, Schedule 2.

b) The requested Accounting Orders are attached.

Witness: Samir Chhelavda

Ontario Energy Board | **Commission de l'énergie de l'Ontario**

Ontario

EB-2014-0311

IN THE MATTER OF the *Ontario Energy Board Act, 1998*, S.O. 1998, c. 15, (Schedule B);

AND IN THE MATTER OF an application by Hydro One Networks Inc. for an accounting order to establish a deferral account to be effective October 1, 2014.

BEFORE: Ken Quesnelle
Presiding Member

Marika Hare
Member

ACCOUNTING ORDER
May 7, 2015

Hydro One Networks Inc. (Hydro One) filed an accounting order application with the Ontario Energy Board, (the OEB) on October 3, 2014 under section 78.1 of the Ontario Energy Board Act, 1998, S.O. 1998, c. 15 (Schedule B). The application sought approval to establish a deferral account for the purpose of recording expenses relating to the North West Bulk Transmission Line (NWBTL) Project.

On March 27, 2015, the OEB approved Hydro One's application for the NWBTL deferral account, to be effective on March 27, 2015. Hydro One was ordered to file a draft Accounting Order with the OEB and intervenors no later than April 7, 2015. As ordered by the OEB, on April 2, 2015 Hydro One filed its draft Accounting Order.

No comments on the draft Accounting Order were filed by OEB staff or intervenors.

THE BOARD ORDERS THAT:

1. The North West Bulk Transmission Line Accounting Order, attached as Appendix A is approved to be effective on March 27, 2015.

DATED at Toronto, May 7, 2015

ONTARIO ENERGY BOARD

Original signed by

Kirsten Walli
Board Secretary

Appendix A

Accounting Order
Hydro One Networks Inc.
EB-2014-0311
NORTH WEST BULK TRANSMISSION LINE PROJECT

This accounting order is intended to reflect the Board's Decision in EB-2014-0311. Hydro One Networks Inc. shall establish the following Deferral Account effective March 27, 2015:

Account 1508, Other Regulatory Assets – Sub-account, North West Bulk Transmission Line Deferral Account – Preliminary Engineering and Planning Costs

Carrying charges shall be determined by applying the Board approved rate pursuant to the Board's interest rate policy, and recorded in a sub-account of this account. Simple interest shall be calculated on the opening monthly principal balance of the account. The amounts recorded shall be brought forward for disposition in Hydro One Network Inc.'s next Transmission Cost of Service application.

Journal Entries to be recorded:

Dr: 4XXX Transmission Expense account range
Cr: 2205 Accounts Payable

To record the preliminary recognition of Hydro One's preliminary engineering and planning costs incurred for the NWBTL Project prior to the selection of a preferred alternative.

Dr: 1508 Other Regulatory Assets – Sub account "North West Bulk Transmission Line Deferral Account – Preliminary Engineering and Planning Costs"

Cr: 4XXX Transmission Expense account range

Where Hydro One incurs incremental costs due to the NWBTL Project, during the phase prior to identification of a preferred alternative, this entry will record the costs for preliminary engineering and planning of the NWBTL Project in a deferral account for future disposition.

Dr: 1508 Other Regulatory Assets – Sub account "North West Bulk Transmission Line Deferral Account - Preliminary Engineering and Planning Costs –Interest Improvement"

Cr: 6035 Other Interest Expense

To record interest improvement on the principal balance of the "North West Bulk Transmission Line Deferral Account".

Ontario Energy Board | **Commission de l'énergie de l'Ontario**

Ontario

EB-2013-0421

IN THE MATTER OF the *Ontario Energy Board Act, 1998,* S.O. 1998, c.15, Schedule B;

AND IN THE MATTER OF an application by Hydro One Networks Inc. for an order or orders pursuant to section 92 of the *Ontario Energy Board Act, 1998* (as amended) granting leave to construct transmission line facilities in the Windsor-Essex Region, Ontario.

PROCEDURAL ORDER NO. 8 AND ACCOUNTING ORDER

August 28, 2015

Hydro One Networks Inc. (Hydro One) applied to the Ontario Energy Board (the OEB) for an order granting leave to construct approximately 13 kilometers of transmission line in the Windsor-Essex area and to install optic ground wire on existing and new towers as part of the Supply to Essex County Transmission Reinforcement project (SECTR Project). The Application was filed on January 22, 2014, under s. 92 of the *Ontario Energy Board Act, 1998,* S.O. 1998, c.15, Schedule B (the Act). Pursuant to Procedural Order No. 3, Hydro One filed an updated application on February 12, 2015, which also included the approvals sought for the associated Leamington Transformer Station (TS) arising out of the decision on threshold questions issued by the OEB on December 16, 2014. The OEB decided that the proceeding would be addressed in two phases. Phase 1 would deal with the leave to construct application, including consideration of the component and total costs of the project, but would not address the cost allocation issues. Phase 2 of the proceeding would deal with the cost allocation.

Phase 1

On July 16, 2015, the OEB issued its Decision and Order on Phase 1. The OEB approved the application subject to certain conditions. The OEB also accepted Hydro One's submission that a deferral account be established to facilitate the allocation of project costs and ordered Hydro One to prepare and file a draft accounting order for each of the deferral accounts requested.

On July 30, 2015, Hydro One filed its draft accounting order and filed the detailed accounting entries for the new deferral account. On August 7, 2015, Hydro One filed an updated draft accounting order. The updated draft accounting order included journal entries to bring the deferral accounts to a nil balance, once the SECTR Project is placed in-service.

Phase 2

As outlined in the accompanying letter, the OEB has determined that it will not proceed with Phase 2 through an adjudicative process, but instead will review the issues from a policy development perspective. The OEB considers it necessary at this time to recognize the work that has been completed to date, and therefore will initiate the cost awards process.

Pursuant to Procedural Order No. 3, cost awards are available to eligible persons under section 30 of the Act. The OEB determined that costs to be awarded in Phase 2 will be recovered from all licensed rate-regulated electricity transmitters and all licensed rate-regulated distributors based on their respective transmission or distribution revenues. The OEB determined that the E3 Coalition (made up of E.L.K. Energy Inc., Entegrus Powerlines Inc., and Essex Powerlines Corporation) is eligible to make a cost claim for Phase 2.

Pursuant to Procedural Order No. 4, the OEB also granted cost award eligibility to the Association of Major Power Consumers in Ontario, the Building Owners and Managers Association, Canadian Manufacturers & Exporters, Consumers Council of Canada, Energy Probe Research Foundation, London Property Management Association, School Energy Coalition, and Wataynikaneyap Power Corporation. The OEB expects parties to follow the *Practice Direction on Cost Awards* (Practice Direction) when submitting their cost claims.

The OEB will use the process set out in section 12 of its Practice Direction to implement the payment of the cost awards. Therefore, the OEB will act as a clearing house for all payments of cost awards in this process.

THE OEB ORDERS THAT:

1. The Accounting Order set out in Schedule "A" of this Order is approved effective July 16, 2015.
2. The intervenors listed above shall submit their cost claim no later than 7 days from the date of this order.
3. If a licensed rate-regulated electricity transmitter and/or licensed rate-regulated distributor has any objection to the claimed costs, such objections must be filed with the OEB within 14 days from the date of this order.
4. Intervenors shall file with the OEB and forward to the objecting party (or the licensed rate-regulated electricity transmitter and/or licensed rate-regulated distributor) any response to any objection for cost claims within 21 days from the date of this decision.
5. All licensed rate-regulated electricity transmitters and all licensed rate-regulated electricity distributors shall pay the OEB's costs incidental to this proceeding upon receipt of the OEB's invoice.

DATED at Toronto, August 28, 2015

ONTARIO ENERGY BOARD

Original Signed By

Kirsten Walli
Board Secretary

SCHEDULE “A”

TO PROCEDURAL ORDER NO. 8
AND ACCOUNTING ORDER

HYDRO ONE NETWORKS INC.
EB-2013-0421

DATED: AUGUST 28, 2015

SCHEDULE A
HYDRO ONE NETWORKS INC. ACCOUNTING ORDER

SECTR Project Construction Costs Deferral Account

During the construction phase of the SECTR Project, where Hydro One's management remains confident that the project will be placed in-service, the following accounting entries will be recorded:

USofA #	Account Description
Dr: 2055	Construction Work In Progress – Electric
Cr: 2205	Accounts Payable

To record construction expenditures incurred by Hydro One relating to the approved SECTR Project

USofA #	Account Description
Dr: 1508	Other Regulatory Assets – Sub account "SECTR Project Construction Costs Deferral Account"
Cr: 1508	Other Regulatory Assets – Sub account "SECTR Project Construction Costs Deferral Account – Contra Account"

To record the amount in the regulatory deferral account and contra-account to track the construction costs incurred by Hydro One on the SECTR project.

The following accounting entries will be recorded when the SECTR Project is placed in-service:

USofA #	Account Description
Dr: 1508	Other Regulatory Assets – Sub account "SECTR Project Construction Costs Deferral Account – Contra Account"
Cr: 1508	Other Regulatory Assets – Sub account "SECTR Project Construction Costs Deferral Account"

To recognize the deferral account and offsetting contra account balances are no longer applicable. When the project is completed and placed in-service the 1508 deferral account tracking entries will be reversed and the balance in both deferral accounts will be nil.

USofA #	Account Description
Dr: 17XX	Electric Plant in Service – Transmission (Asset Account Range)
Cr: 2055	Construction Work in Progress - Electric

To capture when the electric transmission plant asset is placed in-service, the capital expenditures are transferred from CWIP to asset accounts within Property, Plant and Equipment.

In the event that the SECTR Project is not placed in-service, Hydro One will record the following accounting entries:

USofA #	Account Description
Dr: 1508	Other Regulatory Assets – Sub account "SECTR Project Construction Costs Deferral Account – Contra Account"
Cr: 2055	Construction Work in Progress - Electric

To remove the construction costs for the SECTR Project from Construction Work in Progress, to the SECTR Project Construction Costs Deferral Account.

USofA #	Account Description
Dr: 1508	Other Regulatory Assets – Sub account "SECTR Project Construction Costs Deferral Account – Interest Improvement"
Cr: 6035	Other Interest Expense

To record interest improvement on the debit principal balance of the SECTR Project Construction Costs Deferral Account.

Building Owners and Managers Association (BOMA) INTERROGATORY #016

Reference:

Exhibit A, Tab 8, Schedule 1 – Hydro One Inc. 2015 Audited Financial Statements

Interrogatory:

Please explain how the use of non GAAP measure in the financial statements affect, or will affect, regulatory financial statements:

(a) in 2015;
(b) in 2016;
(c) in 2017 and 2018.

Response:

Hydro One Inc. 2015 Audited Financial Statements do not use any non-GAAP measures. The use of non GAAP measures in Hydro One Limited 2015 Audited Financial Statements does not affect, or will not affect, regulatory financial statements in 2015, 2016, 2017 and 2018.

Building Owners and Managers Association (BOMA) INTERROGATORY #017

Reference:
Exhibit A, Tab 8, Schedule 2

Interrogatory:
Please provide the second quarter (first half) unaudited Financial Statements and Hydro One Inc.'s Management Discussion and Analysis.

Response:
The second quarter (first half) unaudited Financial Statements and Hydro One Inc.'s Management Discussion and Analysis are publicly available on SEDAR at www.sedar.com

Witness: Samir Chhelavda

Building Owners and Managers Association (BOMA) INTERROGATORY #018

Reference:

Exhibit A, Tab 9, Consultation with Customers

Interrogatory:

(a) Please confirm that the consultation did not include industrial or large commercial/institutional companies not directly connected to HONI.

(b) Page 33: Is the summary document available? What comments were made (are they the ones stated above)?

Response:

(a) Hydro One confirms that the customer consultation did not include industrial or large commercial/institutional companies not directly connected to HONI.

(b) Hydro One could not locate this reference.

Building Owners and Managers Association (BOMA) INTERROGATORY #019

Reference:

General Distributed Generation

Interrogatory:

Please explain how HONI monitors the growth of distributed generation, including cogeneration in the province, and how it incorporates those developments into its transmission plan.

Response:

Distributed generation ("DG") that can be connected to the distribution system includes generation from such sources as wind, solar, combined heat and power, biomass, water, gas and diesel. DG can reduce the amount of electricity that needs to be delivered from the transmission system to end-use customers. When assessing adequacy of the transmission system, Hydro One analyzes the current DG information from its "List of Applications" and Connection Impact Assessments, any DG data provided by other LDCs with customer-owned stations, and the DG forecasts provided by the IESO in order to determine the load forecasts and system short circuit models required for planning transmission developments.

Building Owners and Managers Association (BOMA) INTERROGATORY #020

Reference:

2015 Annual Report

Interrogatory:

(a) Please provide a copy of HONI's Code of Business Conduct, and a copy of its Whistleblower's policy.

(b) Please describe how the seventy to eighty percent target for dividend payout ratio compares with other major electrical utilities in North America. Please provide HONI's definition of payout ratio. Does it differ from the way other major electricity or electricity/gas utilities define in North America? Please define payout ratio.

Response:

(a) Copies of Hydro One's Code of Business Conduct and Whistleblower's Policy are attached.

(b) The 70 to 80% target for Hydro One Limited's dividend payout ratio reflects advice received by the Province of Ontario from the investment bankers associated with the IPO process. The Board of Hydro One agreed that this range was reasonable taking into account the cash flows and credit profile of the Company, and the effect on the Company's operations. Hydro One understands that this advice would have included analysis of the dividend payout ratios of other major electrical utilities in North America. Hydro One does not independently perform this analysis; it relies on the published equity research from a variety of capital markets entities. Hydro One believes that its 2016 target payout of approximately 72% is consistent with the dividend payout ranges of its relevant corporate comparators.

Hydro One Limited calculates its dividend payout ratio as the total amount of the annualized quarterly dividend of $0.84 per share divided by Hydro One Limited's adjusted net income per share. Another more common definition of dividend payout is annual dividend per share divided by earnings per share. Hydro One cannot comment on whether other major North American electricity electricity/gas utilities have defined and used this term - for their public reporting requirements – in a similar or identical manner.

The dividend-related information found in Hydro One's Annual Report is consistent with US GAAP standards.

Witness: Michael Vels

CODE OF BUSINESS CONDUCT

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Our Core Values

Safe Workplace – Customer Caring – One Company – People Powered – Execution Excellence: these core values are the foundation of our business. These values are reflected in this Code of Business Conduct (this "**Code**"), which defines how each of us, as employees, officers and directors of Hydro One Limited and Hydro One Inc. and their respective subsidiaries (together, "**Hydro One**"), should act.

For Hydro One to be successful, we must continually earn the trust and confidence of our customers, investors, stakeholders and each other. Each business action and decision provides us with this opportunity. Our core values guide our actions and decisions by reminding us each day of who we are and strive to be in all of our business activities.

We must strive to conduct business on behalf of, and to represent, Hydro One with unfailing honesty and integrity and to uphold each of our core values:

- **Safe Workplace:** Nothing is more important than the health and safety of Hydro One employees and the general public. We put safety first in everything we do and are committed to our goal of zero injuries and illnesses.
- **Customer Caring:** We see our work through the eyes of our customers. We know they count on us to deliver the electricity that powers their lives and to keep our promises, share information and offer advice. Serving customers is why we are here.
- **One Company:** We work together to build one great company. Across the business, we are one team working to meet customer, commercial, shareholder and other stakeholder needs with integrity. We are proud of Hydro One and work to ensure our successful and sustainable future.
- **People Powered:** We attract, engage, develop and retain the best people. We respect people, do the right thing by them and build tomorrow's leaders by training, coaching and mentoring at every stage of their careers. Our employees conduct business with unfailing honesty and integrity.
- **Execution Excellence:** Our role never changes – striving to deliver safe, reliable, affordable electricity - but every day starts with the idea that we can always get better. We are relentless in our pursuit of excellence and hold each other accountable for delivering outstanding results and constantly improving. All Hydro One employees are stewards of Ontario's electricity delivery system and are responsible for ensuring that they work safely, efficiently and responsibly for the people of Ontario.

Application of this Code

Who Must Follow This Code?

All employees and officers of Hydro One, including the chief executive officer, chief financial officer and principal accounting officer, and directors of Hydro One are required to comply with this code as representatives of Hydro One (collectively, "**representatives**"). In addition, Hydro One requires each of its contractors, suppliers, business partners, consultants and agents ("**business partners**") to comply with this Code, to the extent feasible, in their dealings with or on behalf of Hydro One.

What is Expected of Me?

We are all expected to:

- **Comply with this Code:** We must read, complete any required training on, understand and comply with this Code and all applicable laws, rules and regulations ("**applicable laws**") relevant to our roles at Hydro One.
- **Report violations of this Code:** If we have knowledge of an actual, potential or suspected violation of this Code or of applicable laws, we must report it truthfully and in good faith to our supervisor or in accordance with Hydro One's Whistleblower Policy.
- **Use good judgment:** We must use our good judgment in deciding whether or not an action will be in compliance with this Code and be accountable for our actions.
- **Ask questions:** If we have any doubt about how to proceed under this Code, we must ask questions. The section "*What if I have questions*", below, includes a list of helpful resources.

Employees and contractors are expected to familiarize themselves with this Code when they first start work and complete training periodically thereafter. Management Compensation Plan ("**MCP**") employees must complete and sign annually, and update as necessary, a compliance form confirming their compliance with this Code and declaring all outside appointments, directorships or officer positions and any resulting conflicts of interest. This form is available at Compliance Form.

hydro one

What Else is Expected of Supervisors?

Supervisors share the same obligations as other representatives, but are also expected to:

- **Set an example:** Supervisors must model appropriate conduct under this Code as it applies to them and to their own actions.
- **Report to the Corporate Ethics Officer:** Supervisors must immediately inform the Corporate Ethics Officer of any actual, potential or suspected violations of this Code as well as any conflict of interest declarations.
- **Promote understanding and compliance:** Supervisors must make sure that Hydro One representatives that they supervise understand and comply with this Code and all applicable laws and review this Code and Hydro One's Whistleblower Policy with those representatives at least annually.
- **Provide guidance:** Supervisors should be a knowledgeable and reliable source of advice for questions relating to this Code and should create an environment where representatives feel comfortable raising questions or concerns without fear of reprisals.

What Happens if I Violate This Code?

If we violate this Code or any applicable laws relevant to our roles at Hydro One, we will be subject to disciplinary procedures, which may have consequences up to and including dismissal. Such violations may also result in criminal and/or civil liability.

What if I Have Questions?

Honesty and common sense are the best guidelines for assessing whether or not an action will be in compliance with this Code, and Hydro One relies on each of us to apply our own personal judgment in carrying out our duties.

However, this Code is not a complete guide to every legal or ethical issue that we may encounter, nor is it a summary of all applicable laws and Hydro One policies and procedures that may apply in a given situation. As a result, there will be times where we will have questions about how this Code applies to us, or about whether a particular action will be in compliance with this Code.

If you have any questions relating to this Code, you should speak to your supervisor and consult the Hydro One intranet site at – Questions and Answers - for a detailed list of frequently asked questions relating to this Code. You should also ask yourself the following questions, which may help to guide your decision:

- Will my action comply with the intent and purpose of this Code and applicable laws?
- Is my action appropriate, ethical and honest – does it "feel" right, or might it violate my own personal code of conduct?
- Would most people see the action as being appropriate, ethical and honest?
- Could I defend my action in front of superiors, fellow employees, the general public and my friends and family? Would I be comfortable doing so?

If the answer to any of these questions is "No", then you should not take the action. If your question remains unanswered after you have spoken to your supervisor, reviewed the intranet resources and considered the questions above, you should contact Hydro One's Corporate Ethics Officer for advice.

Standards of Business Conduct

Health and Safety

We strive to deliver Hydro One's products and services in a safe manner that minimizes the risk of injury to ourselves, to one another and to the general public.

Each of us must:

- comply with Hydro One's Health and Safety Policy and Safety Rules;
- make our own safety and that of other Hydro One representatives and the general public the prime consideration in every decision we make and every action we take;
- come to work fit for duty, work safely and identify, report and, where appropriate, correct, workplace hazards; and
- not work, or permit others to work, while under the influence or suffering the after effects of alcohol, medication or illicit drugs, or bring, or permit anyone else to bring, alcohol or any illicit drugs into any Hydro One workplace.

Respecting Our Colleagues and Others

We treat all Hydro One representatives and others we encounter in the course of our work for Hydro One with dignity and respect. We act in a manner that values the background, experience, perspective and talent of each individual and do not discriminate against or harass others. We strive to create an inclusive corporate culture at Hydro One and a workforce that reflects the diverse populations of the communities in which we operate.

In particular, we:

- provide all Hydro One representatives with equal access to opportunities, within the confines of legal and collective agreement requirements;
- do not discriminate in hiring and employment practices on the basis of race, ancestry, colour, place of origin, sex, ethnic origin, age, marital or family status, physical abilities, sexual orientation, creed, religion or citizenship, nor on any other grounds that are prohibited by applicable law;
- do not make any comment or gesture to, contact with or otherwise act in a manner towards another representative of Hydro One or others we encounter in the course of our work for Hydro One that is unwelcome or which is likely to be regarded as offensive;
- do not tolerate any violence, or behaviours that may promote violence, in any Hydro One workplace; and
- comply with Hydro One's Workplace Human Rights and Anti-Harassment Policy and Procedure.

Achieving our Potential

We are all accountable for our work and for our results, and are committed to giving our full effort in everything we do. We expect to be evaluated by standards such as quality, quantity, timeliness, and whether the work has been completed safely and within the limits of allocated resources.

Supervisors must follow leadership practices that promote employee commitment and encourage high performance, set clear expectations and provide appropriate support and timely feedback to the Hydro One representatives who report to them.

Conflicts of Interest

Avoiding Conflicts of Interest

We owe a duty to Hydro One to make decisions with honesty and integrity and not to deprive Hydro One of the time and attention required to properly perform our duties on behalf of Hydro One. We must declare all conflicts of interest to our supervisor or to the Corporate Ethics Officer.

A "**conflict of interest**" is a situation where our own personal interests:

- *actually conflict* with those of Hydro One;
- *have the potential to conflict* with those of Hydro One, meaning a situation where our relationship to others or interest in or relationship to another business or organization could result in a conflict of interest in the future; or
- *could be perceived to conflict* with those of Hydro One, meaning a situation where other people (either inside or outside of Hydro One) might think that our personal interests conflict, or could potentially conflict, with those of Hydro One, whether or not we think that any conflict does, or might, exist.

Family Members and Friends

We may have a conflict of interest where any of our family or friends receive a personal benefit, or may receive a personal benefit, as a result of any business decisions we make on behalf of Hydro One.

Pursuing Outside Activities

We are encouraged to contribute to our communities and to our professional organizations and we may engage in activities or do work outside of Hydro One (including for ourselves) provided that the activity or work does not create a conflict of interest. Examples of activities or work outside of Hydro One that will create a conflict of interest include:

- work for an organization that is a supplier to or a commercial or industrial customer or competitor of Hydro One;
- activities that affect our work performance at Hydro One, including those that take too much of our time;
- work for any organization done on Hydro One's time or using Hydro One equipment, supplies, personnel or intellectual property; and
- promoting any non-Hydro One product or service or, except with prior approval, soliciting donations to any charitable or non-profit organization, on Hydro One's time or to Hydro One representatives or business partners.

If you have any doubt about whether the external activity or work creates a conflict of interest, you should speak to your supervisor or to the Corporate Ethics Officer before agreeing to do the activity or work.

Accepting Board Appointments

We obtain the prior approval of the Corporate Ethics Officer before agreeing to serve as a director on the board of another for-profit business or organization if our service on that board could create a conflict of interest, including in any case where the business or organization is a supplier to or a commercial or industrial customer or competitor of Hydro One.

Prior approval of the Corporate Ethics Officer is not required to serve as a director of:

- a Hydro One board at Hydro One's request; or
- a charitable or community organization, but only so long as our service on that board does not reflect negatively on Hydro One and does not take too much of our time or otherwise conflict with our work at Hydro One.

If we serve as a director on any board (other than a Hydro One board), we must not vote on any matter that concerns Hydro One or which we think might otherwise create a conflict of interest for us or for Hydro One. Similarly, if we act as a spokesperson for any business or organization, we make it clear that we are speaking for that business or organization or for ourselves and not as a spokesperson or representative of Hydro One.

If in doubt at any time about whether service on any board creates a conflict of interest, speak to your supervisor or to the Corporate Ethics Officer.

Making Investments

In general, investments made by us or by our immediate family members in publicly-traded or privately-held businesses or organizations will not create a conflict of interest, but we must be aware that these investments may create a conflict of interest in some circumstances.

Where an investment creates a conflict of interest we must obtain the approval of our supervisor and the Corporate Ethics Officer before making the investment. Investments that will create a conflict of interest include investments in businesses or organizations that compete with Hydro One or which have a business relationship with Hydro One as a supplier or as a commercial or industrial customer. However, this prohibition does not apply if the investment represents less than five percent of the issued and outstanding equity securities of the business or organization (including equity securities held by us and by our immediate family).

We must also promptly notify our supervisor and the Corporate Ethics Officer if we know a family member or a friend has an investment that represents more than five percent of the issued and outstanding equity securities of a business or organization that competes with Hydro One or which has a business relationship with Hydro One as a supplier or as a commercial or industrial customer, even where we do not hold an investment in that business or organization ourselves.

Confidential Information

No Disclosure of Confidential Information

We do not disclose Confidential Information to anyone outside Hydro One, including to family and friends, unless it is done in accordance with this Code and all other applicable Hydro One policies. This section applies to information which Hydro One has obtained from a customer or supplier (or a prospective customer or supplier) that Hydro One has agreed to keep confidential.

"**Confidential Information**" of Hydro One includes trade secrets, intellectual property and any proprietary, sensitive, technical, commercial, strategic, financial, customer, supplier and personal information about customers, suppliers and representatives, in each case, that is not publicly available.

Our obligation not to disclose Confidential Information continues even after we cease to have an employment or other relationship with Hydro One.

In order to protect Confidential Information of Hydro One, we must:

- be alert to inadvertent or accidental disclosure of Confidential Information in social conversations, including in public places, at trade conferences, on public transit or airplanes, on mobile devices or in normal business discussions with suppliers and customers;
- never post, transmit or make available any Confidential Information on or through the internet other than through the use of approved Hydro One equipment and systems (i.e. through the use of Hydro One e-mail addresses or Hydro One intranet portals);
- never leave Confidential Information or devices that contain Confidential Information, or which are connected to or have specific capability to connect to Hydro One's systems, unattended in public places, and we must ensure these devices are stored securely when not in use; and
- promptly report any Confidential Information that we believe has been leaked and any device that is lost or stolen so that appropriate steps can be taken by Hydro One.

Permitted Disclosure of Confidential Information

We may only disclose Confidential Information to our colleagues within Hydro One where it is necessary for them to perform their assigned work.

We keep the amount of Confidential Information shared with anyone outside of Hydro One to the minimum required, and we may only disclose Confidential Information outside Hydro One where the disclosure is:

- required by applicable laws or stock exchange rules or to those having a business relationship with Hydro One for valid business purposes; and
- in compliance with all applicable Hydro One policies and procedures, including the Corporate Disclosure Policy (if applicable).

The Law Department should be contacted if there is any uncertainty as to whether or not we are permitted to disclose the Confidential Information.

Employee Confidential Information

We manage all personal information about other representatives of Hydro One in a confidential manner and we respect the privacy of each other Hydro One representative, including by complying with all applicable privacy legislation and all applicable Hydro One policies and procedures.

Ethical Purchasing Decisions

We make all purchasing decisions honestly and with integrity, using such criteria as competitive pricing, quality, quantity, delivery, and service.

We avoid making purchasing decisions that create a conflict of interest for us or for Hydro One, including where there could be an allegation of favouritism, prejudice, preferential treatment or personal gain.

We inform each of our business partners about this Code and about our expectation that they comply with it to the extent feasible. We will communicate any non-compliance by any of our business partners to Hydro One's Corporate Ethics Officer, who will recommend what actions should be taken, up to and including termination of the business relationship.

Gifts and Entertainment

We do not (directly or indirectly) offer, give, request or accept any:

- bribe or kickback or other transaction which could compromise the integrity or harm the reputation of Hydro One or its representatives;

- gifts of cash, gift certificates, services, discounts, or loans;
- gift, entertainment, or similar type of benefit that does not serve a legitimate business purpose;
- gift, entertainment, or similar type of benefit that contravenes any applicable law; or
- gift, entertainment, or similar type of benefit that creates a conflict of interest for us or for Hydro One.

Any gift, entertainment or similar type of benefit that is offered, given or accepted must be of a nature and amount that avoids embarrassment, does not constitute a real personal enrichment of the recipient, and would not reflect unfavourably on Hydro One or the person receiving the gift, entertainment or benefit if it became publicly known. Generally speaking, acceptable gifts will have a nominal value.

Any gifts we are offered or receive that do not comply with these restrictions should be declined or returned graciously and with thanks and a clarification of Hydro One's policy. If returning the gift is not possible, it should be suitably distributed in the community. These requirements do not change during traditional gift-giving seasons.

Insider Trading and Personal Advantage

We only buy or sell securities of Hydro One in accordance with Hydro One's Insider Trading Policy. This means that we do not buy or sell securities of Hydro One while we know about "Material Information" relating to Hydro One that has not been generally disclosed to the public in accordance with Hydro One's Corporate Disclosure Policy ("**insider trading**"). We also keep all undisclosed Material Information confidential and we do not pass any of it on to others, including to a spouse, friends or family members ("**tipping**").

In addition to being a violation of this Code, both insider trading and tipping are illegal.

"**Material Information**" has the same meaning as in Hydro One's Insider Trading Policy and Corporate Disclosure Policy, and may include Confidential Information, including information about Hydro One's plans, financial conditions or operations.

We do not use any Confidential Information for private speculation or personal advantage or benefit, including for purposes of trading in securities of any of Hydro One's customers or suppliers with the benefit of any Confidential Information relating to that customer or supplier.

Protecting the Environment

We strive to comply with all environmental laws, rules and regulations, and Hydro One will also move beyond compliance where it makes business sense to do so. We design, build and operate our facilities to make efficient use of resources, prevent pollution and reduce environmental effects to the extent that is reasonably achievable. We set environmental objectives and targets, monitor our performance relative to expectations and implement programs to achieve continual improvement.

Safeguarding Hydro One's Assets

Proper Use of Assets

We use Hydro One's assets properly, safely, efficiently and only for Hydro One business. Use of Hydro One assets for charitable or other non-business reasons must be pre-approved by the supervisor accountable for that asset. Misuse of Hydro One assets to offend, harass or harm others, or to encourage others to do so, is unacceptable.

We take good care of Hydro One assets. We protect them from all external and internal threats and, when they are no longer useful, we dispose of them in a proper manner. Theft or fraud will not be tolerated.

Critical Cyber Assets

We must be vigilant in protecting Hydro One's Critical Cyber Assets from attack and follow Hydro One's Power System Cyber Security Policy.

"**Critical Cyber Assets**" are all computer equipment and software essential to the reliable operation of Hydro One's facilities which if hacked or destroyed, would affect the reliability of the interconnected transmission system across North America. It also includes all devices and equipment used to access such computer equipment and software.

Further, we do not disguise our own identity, or use the identity of another representative or business partner, when accessing any Hydro One workplace, device, system or other property.

Records and Document Retention

Records are important to provide evidence of Hydro One's business activities, decisions, operations and transactions, to meet our business, financial reporting and legal needs.

We are all responsible for managing Hydro One records in accordance with Hydro One's Records Management Program, including Hydro One's Records Management Policy, Records Management Procedures, E-Mail Management Policy, and the Legal and Tax Holds Policy.

All business expenses must be properly incurred, documented, reported and approved in compliance with Hydro One's Employee Business Expense Policy.

Intellectual Property

All intellectual property which we may produce, make, compose, write, perform or design, whether alone or with others, while employed at Hydro One (whether during or after work hours) and in any way relating to Hydro One's business belongs exclusively to Hydro One. We must disclose all such intellectual property to Hydro One and all rights we may have in such intellectual property are assigned to Hydro One.

"**intellectual property**" includes ideas, know-how, inventions, designs, discoveries, formulae, improvements, research, trade secrets, patents, copyright works and other intellectual property rights.

Accounting and Finance

All financial transactions must be properly approved in accordance with Hydro One's authority approval guidelines and properly recorded in accordance with:

- Hydro One's internal control policies and procedures;
- legal requirements;
- audit practices; and
- accounting standards and practices.

Any financial information provided must be accurate, complete, objective, timely and understandable.

We do not maintain undisclosed funds or accounts or "off-the-books" records or use any other device to distort records or reports of Hydro One's true operating results and financial condition. All cash and bank account and other business transactions are conducted in an appropriate manner which safeguards against bribery, kickbacks, money laundering or other illegality. Falsifying or maintaining inaccurate or incomplete records can result in civil and criminal penalties to Hydro One and the individuals involved.

We must not mislead, manipulate, coerce or fraudulently influence any accountant, including an accountant engaged in the performance of an audit of the financial statements of Hydro One in order to make the financial statements materially misleading.

If we have concerns about the integrity of financial reporting, we report them promptly. Reports may be made to Hydro One's Corporate Ethics Officer, as Confidential Designee, pursuant to Hydro One's Whistleblower Policy or, alternatively, may be reported anonymously through ClearView Strategic Partners Inc. ("**ClearView**") using the contact information provided under the heading "*Anonymous Reporting*". We must all be familiar with the reporting procedures contained in Hydro One's Whistleblower Policy.

Managing Risk

We appropriately identify and control risks, within the limits of our accountabilities and allocated resources.

"**risk**" means any possible event that may adversely impact Hydro One's business objectives. If business objectives relevant to our work are not clear, we should ask our supervisor for help.

Controlling risk does not mean eliminating all risks. Rather, it means taking steps to manage the risks to acceptable levels for Hydro One. If we are concerned that there are situations where risks are not being appropriately controlled by other Hydro One representatives we will discuss the situation with our supervisor and, if not resolved, we will consult the Corporate Ethics Officer for direction.

Using E-mail, the Internet and other Electronic Communication Devices

Access to electronic communication devices such as phones, e-mail and the internet is made available to promote effective work-related research, improve our development and enhance communication within Hydro One. These resources should generally be used for business purposes only.

Information transmitted through Hydro One's equipment or systems implies affiliation with Hydro One and should therefore reflect positively upon Hydro One. When using Hydro One e-mail or the internet at a Hydro One workplace or on or through a Hydro One device or system, we do not send, receive, display, print, or otherwise engage in any communications that are in violation of applicable laws or this Code, or any other Hydro One policy, including, but not limited to:

- downloading programs not already supported by Hydro One;
- accessing sites that are unlawful, that carry socially or politically offensive material, that infringe or that may infringe the intellectual property or other rights of another person, business or organization or that are in any way related to terrorism;
- sending chain letters or threatening, libelous or harassing messages; and
- sending, viewing or obtaining pornographic material.

We also do not use the internet at a Hydro One workplace or on or through a Hydro One device or system to play games, gamble or to post or send messages under disguised identification.

Subject to applicable laws, all information of any kind (including without limitation voice communications and electronic messages) stored or transmitted on Hydro One's equipment or systems is the property of Hydro One and Hydro One's equipment and systems and the contents thereof are monitored to support operational, maintenance, auditing, security, and investigative activities. In order to prevent inappropriate use, Hydro One continues to monitor personal use electronic communications. No one using Hydro One's equipment or systems should assume that their electronic communications, information, computer or other device use is private.

The use of social networking tools and platforms such as Facebook, LinkedIn, Google+, Yahoo! Groups, Twitter, YouTube, and blogs, including outside of work, is subject to this Code and all applicable Hydro One policies, including Hydro One's Social Media Policy. Whether on duty or off duty, employees must not:

- post or disclose Confidential Information; or
- post comments or materials which could harm, or be perceived to harm, Hydro One or its reputation in any way.

Relationships

Relationships with Investors

We disclose Material Information to the public in a timely, factual and accurate manner, in accordance with Hydro One's Corporate Disclosure Policy. We ensure that all reports and documents that we file with or furnish to securities regulatory authorities in Canada and the United States, and our other public communications, contain disclosure that is full, fair, accurate, timely and understandable. If we are asked by a member of the media, analysts, investors, investment dealers, credit rating agencies or other members of the investment community to give a statement or a presentation, we must explain that we are bound by this Code and Hydro One's Corporate Disclosure Policy and refer the matter to the Senior Vice President, Customer & Corporate Relations (or the person performing that function) or the Chief Financial Officer.

Relationships with Customers

Hydro One is a customer-focused company and we strive to enhance our customer relationships in every transaction.

This means that we:

- work in a safe and responsible manner when on the property of a customer or other third party;
- act as an ambassador of Hydro One by acting in a professional and empathetic manner when interacting with customers and by responding promptly and courteously to customer enquiries and requests;
- keep commitments to customers by following up through completion when resolving a customer's enquiry or request and by working to prevent a recurrence;
- reasonably restore a customer or other third party's property when work is completed;
- do not discriminate against or provide undue preferential treatment to any customer;
- seek customers' views on issues affecting them, consider their views, and give them feedback where possible;
- give customers the information they need to make informed choices and ensure they receive truthful information about our products and services; and
- respect customers' privacy and diversity.

Fair Competition

We obey the applicable laws governing competition, not conspiring with anyone to lessen fair competition. We do not engage in anti-competitive practices or illegal activities such as price-fixing, bid-rigging and kickbacks. We ensure all procurement policies, procedures and required processes are followed.

We gather information about competitors in a lawful manner. We do not, directly or indirectly, misrepresent ourselves, use a third party or offer bribes or gifts to solicit proprietary information about competitors.

Use of Intellectual Property Belonging to Others

We do not knowingly use intellectual property belonging to another person, business or organization without their consent, a license or other legal right to use that intellectual property, nor do we copy or permit others to copy any software under license to Hydro One other than in accordance with the applicable license.

Political Participation

As private citizens, we may take part in the democratic process at any level, including campaigning in elections, during non-working hours. Prior approval is required if we need a leave of absence to participate, and our participation must be kept strictly separate from our association with Hydro One. All such leaves of absence will be without pay.

Hydro One does not make donations (financial or otherwise) to political parties, elected representatives, or candidates for election at any time. We do not, directly or indirectly, put pressure on colleagues, customers or suppliers to donate time or money to any political party, candidate or political cause.

Conduct of Business Outside of Canada

We apply this Code to all of our operations, international as well as domestic, and understand that this Code must be complied with in all circumstances even if conventional practice is different in foreign jurisdictions. We strive to comply with both the letter and spirit of domestic and foreign legal requirements as they apply to our business activities. We also adhere to standards no less onerous than provided by Canadian law concerning the conduct of business in foreign countries.

Dealing with Public Officials

All of our dealings on behalf of Hydro One with public officials are to be conducted in a transparent manner that does not compromise the integrity or harm the reputation of Hydro One or its representatives or any public official.

We comply with all anti-bribery and anti-corruption legislation, both Canadian and foreign, which may apply to our operations anywhere in the world. Further, even if permitted by applicable legislation or if customary in a jurisdiction, the making of small "facilitation payments" to foreign public officials to secure a routine business service or have routine administrative actions performed is prohibited.

These restrictions apply to any:

- direct disbursement of Hydro One funds;
- other benefits or contributions directly from Hydro One; and
- funds, benefits or contributions made by us personally or through agents, consultants, contractors, business partners or other third parties.

"**public official**" includes any:

- official or employee of a government or of a department, organization, agency or instrumentality of a government;
- official who holds a legislative or judicial position;
- official of a public international organization;
- political party or official of a political party;
- candidate for political office; and
- person or firm acting for or on behalf of any of the above.

As laws, rules and regulations and policies and directives of regulators can significantly affect Hydro One's business or operations, from time to time Hydro One may wish to communicate with public officials respecting new laws, rules, regulations, policies and directives, or otherwise seek to participate in the policy-making process. We only do so in compliance with all applicable requirements regarding lobbying activities and with the prior approval of the Corporate Ethics Officer. Similarly, prior approval of the Corporate Ethics Officer is required before Hydro One or any representative may accept any request to be appointed to an advisory or study group established by any legislative or regulatory body or which otherwise involves public officials.

Since Hydro One is in a regulated business and is often in contact with regulators about its business and operations, all Hydro One representatives and business partners responsible for contacts with such public officials must be familiar with and comply with the laws, rules and regulations established by the regulator for such communications, including conflict-of-interest rules applicable to representatives of the regulator.

We must also consult with the Corporate Ethics Officer prior to hiring a current or former public official because applicable laws restrict Hydro One's ability to engage former public officials as a representative of Hydro One. We will not hire any such official if he or she participated in a matter reasonably regarded as involving Hydro One's interests if that matter is still ongoing.

Investigations

Hydro One's policy is to cooperate with any appropriate governmental or regulatory investigation. A condition of such cooperation, however, is that Hydro One be adequately represented in such investigations by its own legal counsel. This means that, any time we receive information about a new government, regulatory or other investigation or inquiry, including any written or oral request for information, this information should be communicated immediately, and before any action is taken or promised, to the Law Department.

We also cooperate with all internal Hydro One investigations, including investigations conducted by the Corporate Ethics Officer, as Confidential Designee, pursuant to Hydro One's Whistleblower Policy, and will afford full, free and unrestricted access to all of Hydro One's operations, records, facilities and personnel to any external or internal investigators engaged by Hydro One and will take appropriate measures to keep information obtained during the investigation process confidential. Unless otherwise advised by our supervisor or the boards of directors of Hydro One Limited and Hydro One Inc., we will keep confidential the fact that an internal investigation is being conducted.

We must never, under any circumstances:

- destroy or alter any of Hydro One's documents or records in anticipation of a request for those documents from any government agency or a court or in connection with any internal Hydro One investigation;
- lie or make any misleading statements to any governmental investigator (including routine as well as non-routine investigations) or investigator participating in any internal Hydro One investigation; or
- attempt to cause Hydro One, any representative, business partner or any other person, to fail to provide information to any government investigator or to any investigator participating in any internal Hydro One investigation, or to provide any false or misleading information.

Compliance and Reporting

Upholding Hydro One's well-earned reputation as an ethical and credible company is a commitment we all share. All of us are expected to uphold our core values and to otherwise comply with this Code, including reporting any violation or potential or suspected violation of this Code promptly, truthfully and in good faith. If we fail to report a violation we know has occurred, then we also will have violated this Code.

No Reprisals

Hydro One will not permit any form of reprisals (including discharge, demotion, suspension, threats, harassment or any other form of discrimination) by any person or group, directly or indirectly, against a representative or business partner who has truthfully and in good faith:

- reported actual, potential or suspected violations of this Code;
- lawfully provided information or assistance in an investigation regarding any conduct which the representative or business partner reasonably believes constitutes a violation of applicable securities laws or applicable federal laws relating to fraud against Hydro One's securityholders;
- filed, caused to be filed, testified, participated in or otherwise assisted in a proceeding related to a violation of applicable securities laws or applicable federal laws relating to fraud against Hydro One's securityholders;
- provided a law enforcement officer with truthful information regarding the commission or possible commission of an offense, unless the individual reporting is one of the violators; or
- provided assistance to the Corporate Ethics Officer, as Confidential Designee, the Audit Committee, management or any other person or group in the investigation of a report made pursuant to Hydro One's Whistleblower Policy.

Any retaliation against a representative or business partner who has, truthfully and in good faith, made such a report or taken such an action is subject to disciplinary action, which may include dismissal.

Anonymous Reporting

Any actual, potential or suspected violation of this Code can be reported anonymously to the Corporate Ethics Officer, as Confidential Designee, in accordance with Hydro One's Whistleblower Policy.

Alternatively, reports can be submitted anonymously to ClearView by:

- Telephone: 1-866-921-4491;
- Internet: http://www.clearviewconnects.com; or
- Confidential Mail: P.O. Box 11017, Toronto, Ontario, M1E 1N0.

Choosing to include personal information in a report to ClearView means you have consented to the collection of that personal information by Hydro One, and the information will be sent to Hydro One.

All reports should include as much detail as possible, including dates, individuals or witnesses involved and any supporting material or evidence that may be relevant to the matter being reported.

Amendment and Interpretation; Waivers

Hydro One retains sole discretion in interpreting and applying this Code and this Code may be updated, modified or withdrawn by Hydro One at any time in its sole discretion. This Code, together with any amendments, will be generally disclosed to the public in accordance with all applicable securities laws and stock exchange rules.

Any waivers from this Code for the benefit of:

- executive officers or directors of Hydro One Limited and Hydro One Inc. - will only be made in exceptional circumstances, may only be granted by the applicable board of directors and will be generally disclosed to the public in accordance with all applicable securities laws and stock exchange rules; or
- other representatives - must be made in writing by their supervisor, or if there is no supervisor or the supervisor is unsure whether or not a waiver is appropriate, then the Corporate Ethics Officer should be consulted.

Document Number: **SP 1761 R0**

Document Name: **Whistleblower Policy**

Posted Date: **2015/11/06**

When in printed form or used offline, this document is uncontrolled.
It is the user's responsibility to verify that this copy matches the document on the HODS website.

Revision History

Version	Brief Description of Revisions
R0	This is a new HODS document.

Contents

1.0 Whistleblower Policy

Click to view Whistleblower Policy in Word format.

Appendix A: Document Management

Owner/Functional Responsibility	Corporate Ethics Officer
Original Approval Date	October 2015
Approval Required By	Hydro One Limited/Hydro One Inc. Board of Directors
Original Effective Date	November 4, 2015
Document Last Revised	October 23, 2015

HYDRO ONE LIMITED

WHISTLEBLOWER POLICY

1.0 Purpose

The Code of Business Conduct (the "**Code**") of Hydro One Limited and Hydro One Inc. (together with their respective subsidiaries, "**Hydro One**") requires all employees and officers of Hydro One, including the chief executive officer ("**CEO**"), chief financial officer ("**CFO**") and principal accounting officer, and all directors of Hydro One (collectively, "**representatives**") to comply with the Code. Hydro One requires all of its contractors, suppliers, business partners, consultants and agents (together, "**business partners**") to adhere to the Code, to the extent feasible, in their dealings with or on behalf of Hydro One.

Although Hydro One is committed to conducting business with unfailing honesty and integrity, and to upholding each of its core values, including through compliance with the Code, applicable laws, rules and regulations ("**applicable laws**") and applicable audit practices and accounting standards and practices, intentional and unintentional violations of the Code, applicable laws and applicable audit practices and accounting standards and practices may still occur. When these violations do occur, Hydro One has a responsibility to investigate and, where appropriate, to report, these violations and the actions Hydro One has taken to address them.

This Whistleblower Policy (this "**Policy**") sets out the procedures for representatives and business partners to report violations, or potential or suspected violations, of the Code, applicable laws and applicable audit practices and accounting standards and practices and other matters, as outlined below under the heading "*What is Reportable Conduct?*".

These procedures include the procedures for the receipt, retention and treatment of complaints received by Hydro One regarding accounting, internal accounting controls or auditing matters and the confidential, anonymous submission by representatives of concerns regarding questionable accounting or auditing matters that the Audit Committee of Hydro One (the "**Audit Committee**") is required to establish by applicable securities laws. The Audit Committee has approved this Policy and oversees management's monitoring of compliance with the Code and the administration of this Policy.

2.0 What is Reportable Conduct?

Representatives and business partners may make reports ("**Reports**") relating to:

(a) questionable accounting, internal accounting controls and auditing matters, including the circumvention or attempted circumvention of internal accounting controls or with respect to matters that would otherwise constitute a violation of Hydro One's accounting policies;

(b) any matter that involves a significant threat to the health and safety of other representatives, business partners and/or the general public;

(c) any circumstance where a representative or business partner believes that he or she is being asked to commit a wrongdoing; or

(d) any other actual, potential or suspected violation of the Code or of applicable laws,

(together, "**Reportable Matters**").

3.0 How do I Make a Report?

3.1 General

Any representative or business partner, acting truthfully and in good faith, may make a Report to the Audit Committee, care of the Confidential Designee (as defined below). Reports should describe the Reportable Matter in as much detail as possible, including dates, individuals or witnesses involved and any supporting material or evidence that may be relevant to the Reportable Matter.

Prior to making a Report, representatives should consider discussing the Reportable Matter with their supervisor or another person who may be able to help resolve the matter. However, where a Reportable Matter continues to be unresolved following such a discussion, where it is not possible for the representative to discuss the Reportable Matter with their supervisor (or where the representative is uncomfortable doing so) or where the Reportable Matter is time sensitive, the representative should submit a Report to the Confidential Designee.

The "**Confidential Designee**" is a person designated by the Audit Committee to assist the Audit Committee in responding to Reports in accordance with this Policy. The Confidential Designee will always be independent of Hydro One's financial reporting function and, until the Audit Committee designates another person, the Confidential Designee will be Hydro One's Corporate Ethics Officer.

3.2 Anonymous Reports

Representatives or business partners wishing to submit a Report may do so on an anonymous basis as described below. However, although all reasonable steps will be taken by Hydro One to maintain the anonymity a person who makes a Report on an anonymous basis, the source or nature of the Report, or the steps required to be taken to investigate the Report described under the heading "*Treatment and Investigation of Reports – Investigating Reports*", may, as a practical matter, make it difficult or impossible to maintain such anonymity.

3.3 Submitting a Report

Reports should be addressed to "The Audit Committee of the Board of Directors of Hydro One Limited, c/o the Corporate Ethics Officer" at 483 Bay St., 8th Floor, South Tower, Toronto, Ontario, M5G 2P5 and marked "confidential", or may be sent by e-mail to corporateethicsofficer@hydroone.com .

Alternatively, Reports can be submitted anonymously to ClearView Strategic Partners Inc. ("**ClearView**") by:

- Telephone: 1.866.921.4491
- Internet: http://www.clearviewconnects.com
- Confidential Mail: P.O. Box 11017, Toronto, Ontario, M1E 1N0

A representative or business partner choosing to include personal information in a report to ClearView means such representative or business partner has consented to the collection of that personal information by Hydro One and the information will be sent to Hydro One.

4.0 Receipt of Reports by Others

Any representative or business partner (other than the Confidential Designee) who receives a Report that has been made pursuant to this Policy in any written form (including by e-mail) must forward the Report to the Audit Committee, care of the Confidential Designee, right away. If a Report is submitted by voicemail, the recipient must promptly forward a transcript of the voicemail message to the Audit Committee, care of the Confidential Designee. Where a Report is made orally, the recipient must prepare a reasonable summary of the Report and forward the summary to the Audit Committee, care of the Confidential Designee. If the Report has been made on an anonymous basis, the written or transcribed Report or the summary of the oral Report should state that fact.

The Confidential Designee must review all Reports promptly and will advise the Audit Committee (and, at his or her discretion, the CEO and/or CFO) immediately, if the Confidential Designee determines that it is required by the nature of the Report, or otherwise at the next scheduled meeting of the Audit Committee as described under the heading "*Records Relating to Reports*".

5.0 Treatment and Investigation of Reports

5.1 Confidentiality

All Reports will be treated as confidential, whether or not made anonymously, and Reports will only be accessible to people that the Confidential Designee determines have a "need to know". Ordinarily, a need to know arises from an obligation to investigate or to take remedial or disciplinary action on the basis of the information contained in the Report. For clarity, sharing information about a Report in a manner required by this Policy will not be considered a breach of confidentiality.

Unless the Report has been made on an anonymous basis, the Confidential Designee will advise the person who made the Report when the Report has been received by the Confidential Designee and when the investigation (if any) has been completed. The person who made the Report will not be advised of the results of the investigation (if any) unless the Audit Committee determines otherwise.

5.2 Investigating Reports

The Confidential Designee is responsible for assessing and evaluating Reports and for conducting investigations. In determining whether a Report should be investigated, and the extent of the investigation, the Confidential Designee (in consultation with the Audit Committee, if the Confidential Designee determines it is appropriate) will consider, among any other factors, the following:

(a) *Who is the alleged wrongdoer?* If a member of management is alleged to have been involved in the Reportable Matter, that factor alone may influence the decision in favour of conducting the investigation;

(b) *What is the nature of the Reportable Matter?* Depending on the nature of the Reportable Matter, the core investigation team should include a management representative from human resources, finance and other departments, as necessary, depending on their area of oversight and expertise (for example, environmental issues and health and safety);

(c) *How serious is the Reportable Matter?* The more serious the allegation made in the Report, the more appropriate it would be to undertake the investigation. If the Reportable Matter would affect the integrity of the financial statements of Hydro One, that factor alone may influence the decision in favour of conducting the investigation; and

(d) *How credible is the allegation being made?* The more credible the allegation made in the Report, the more appropriate it may be to undertake the investigation. In assessing credibility, all facts surrounding the allegation should be considered.

In accordance with the Code, all representatives and, to the extent feasible, business partners have an obligation to cooperate with all investigations initiated by the Confidential Designee pursuant to this Policy.

At any time during the investigation of a Report, the Confidential Designee may notify the CEO, CFO, Hydro One's General Counsel or Hydro One's outside auditors or legal counsel about the submission of the Report or about the progress of the investigation. The Confidential Designee may provide sufficient detail to allow for appropriate consideration to be given by these individuals to the ongoing disclosure obligations of Hydro One, including any required officer certifications, in each case, without compromising the confidential or anonymous nature of the Report.

The Audit Committee may engage independent advisors at the expense of Hydro One to assist the Confidential Designee to undertake investigations and/or recommend appropriate action.

During the investigation of a Report, a representative or other person who is the subject of an investigation may be placed on administrative or investigatory leave, or on another similar arrangement if the subject of the investigation is not an employee or officer of Hydro One, as applicable, when it is determined by the Audit Committee that such a leave would serve the interests of the representative or other person, Hydro One, or both. Such a leave is not to be interpreted as an accusation or a conclusion of guilt or innocence of any person, including the person on leave.

A representative or other person who is the subject of an investigation relating to a Report will be informed of the completion of an investigation. Individuals who are investigated will be given an opportunity to be heard prior to any disciplinary action being taken against them.

If a Report indicates that illegal activity or a regulatory breach has occurred, the Confidential Designee (in consultation with and on behalf of the Audit Committee) may make a report to the police or other law enforcement or regulatory agency, as appropriate.

5.3 Remedial Action

If the Confidential Designee determines, following his or her assessment, evaluation or investigation of a Report, that the Report was made truthfully and in good faith and related to a Reportable Matter that did occur or was about to occur, the Confidential Designee will report to the Audit Committee immediately, if necessary, or otherwise at the next scheduled meeting of the Audit Committee as described under the heading "*Records Relating to Reports*". The Audit Committee will determine (by majority vote) what, if any, remedial action is appropriate. The Audit Committee will promptly inform the board of Directors of Hydro One Limited (the "**Board**") of such proposed remedial action in writing.

In the event of a Report involving a complaint against the Audit Committee, the Audit Committee will retain independent advisors to provide the Audit Committee with their view on the appropriate remedial action.

6.0 Protection of Whistleblowers

Hydro One will not permit any form of reprisals (including discharge, demotion, suspension, threats, harassment or any other form of discrimination) by any person or group, directly or indirectly, against any representative or business partner who, truthfully and in good faith:

(a) reported a Reportable Matter;

(b) lawfully provided information or assistance in an investigation regarding any conduct which the representative or business partner reasonably believes constitutes a violation of applicable securities laws or applicable federal laws relating to fraud against Hydro One's securityholders;

(c) filed, caused to be filed, testified, participated in or otherwise assisted in a proceeding related to a violation of applicable securities laws or applicable federal laws relating to fraud against Hydro One's securityholders;

(d) provided a law enforcement officer with truthful information regarding the commission or possible commission of an offence, unless the individual reporting is one of the violators; or

(e) provided assistance to the Confidential Designee, the Audit Committee, management or any other person or group in the investigation of a Report.

Any retaliation against a representative or business partner who has, truthfully and in good faith, made a Report about a Reportable Matter in accordance with this Policy or taken such an action is subject to disciplinary action, which may include dismissal.

The Confidential Designee, the Audit Committee and any persons involved in or retained to assist in an investigation of a Report must take all reasonable steps to not reveal the identity of any person who reports a Reportable Matter anonymously, unless required to do so by law.

7.0 Records Relating to Reports

The Confidential Designee will maintain a log of all Reports, tracking how and when each Report was received, the nature and results of any investigation and the resolution of the matter. A quarterly summary of Reports received, under investigation and resolved within the preceding quarter shall be reported to the Audit Committee by the Confidential Designee. The Audit Committee will report to the Board where it determines a report is necessary or appropriate following its receipt and consideration of such summary of Reports received, and the Audit Committee may report at such other times as it may determine.

Records pertaining to a Report about a Reportable Matter are the property of Hydro One and will be retained in accordance with Hydro One's record retention policies.

8.0 Questions

Any questions concerning this Policy should be directed to the Corporate Ethics Officer.

Approved by the Board on October 23, 2015.

Building Owners and Managers Association (BOMA) INTERROGATORY #021

Reference:

Exhibit B1, Tab 2, Schedule 4, Attachment 1, Page 6

Interrogatory:

To what extent has HONI responded to:

(a) hardware failures by replacement of the conductor rather than simply replacing the hardware over the last ten years? Please quantify.

(b) how are units of conductor defined and demarcated for monitoring, repair purposes, for example, in spans between towers? Is each span numbered? Please explain.

Response:

a) Please refer to Board Staff IR 22, part e.

b) Hydro One monitors and replaces its conductors by line sections. Each line section contains a number of spans and varies in length measured in km.

Building Owners and Managers Association (BOMA) INTERROGATORY #022

Reference:

Exhibit B1, Tab 1, Schedule 1

Interrogatory:

Page 1: Please explain what HONI means by "top quartile reliability". In relation to what groups are you speaking? Please provide the companies that are the comparators, and if possible, which quartile they are in, but in any event, list the companies by name and location that are the comparators.

Response:

Please refer to Board Staff #9 (a), (I-01-009, (a)) for the definition of "top quartile reliability". The peer group includes major Canadian transmission companies. They are listed below with locations.

- BC Hydro, British Columbia
- AltaLink Management Ltd., Alberta
- ATCO Electric, Alberta
- Manitoba Hydro, Manitoba
- Hydro-Quebec, Quebec

Building Owners and Managers Association (BOMA) INTERROGATORY #023

Reference:
Exhibit B1, Tab 1, Schedule 1, Page 2

Interrogatory:
Please provide a clear and detailed schedule, showing the forecast planned outage period (please describe in words, the commencement, outage term, and return date, in addition to any graphical representation) for:

(a) each of the nuclear units to be refurbished;

(b) the planned dates for the retirement of the remaining Pickering units;

(c) if there is some variability around any of these dates, in other words, a range of dates, please provide.

Response:
The following Bruce Nuclear units are planned for refurbishment:
- Unit 3 – 2022 to mid-2026
- Unit 4 – 2025 to 2027
- Unit 5 – mid-2026 to mid-2029
- Unit 6 – 2020 to 2023
- Unit 7 – mid-2028 to mid-2031
- Unit 8 – mid 2030 to mid-2033

The following Darlington Nuclear units are planned for refurbishment
- Unit 1 – April 2021 to June 2024
- Unit 2 – October 2016 to February 2020
- Unit 3 – December 2019 to April 2023
- Unit 4 – January 2023 to February 2026

The Pickering Nuclear Unit 1 & 4 are proposed to cease operation at the end of 2022. Units 5-8 are proposed to cease operation at the end of 2024.

Witness: Mike Penstone

Based on the planned outage information above, the table below provides an illustration of the significant nuclear generation that will be unavailable during the 2021 to 2030 period.

Year	Number of Units Unavailable			Approximate Generation Unavailable (MW)
	Darlington	Bruce	Pickering	
2021	2	1		2800
2022	2	2		3600
2023	2	2	2	4600
2024	1-2	1	2	2700-3600
2025	1	2	6	5500
2026		2	6	4700
2027		2	6	4700
2028		1-2	6	3900-4800
2029		1-2	6	3900-4800
2030		1-2	6	3900-4800

Unit unavailability rounded to nearest 6 month

Sources: Bruce Power Backgrounder, dated Dec 3, 2015
OPGI Rate Application EB-2016-0152, Exhibits F2-02-03_Attachment 2 & D2-2-8 Attachment1

Building Owners and Managers Association (BOMA) INTERROGATORY #024

Reference:

Exhibit B1, Tab 1, Schedule 1, Page 2

Interrogatory:

Please provide the details of the "more stringent performance management system". What do you mean by the word "stringent" in the context of the paragraph at lines 11-14?

Response:

Details on the more stringent performance management system are provided in Exhibit B2, Tab 1, Schedule 1. In this context, “more stringent” means more rigorous than before.

Witness: Michael Vels

Building Owners and Managers Association (BOMA) INTERROGATORY #025

Reference:
Exhibit B1, Tab 1, Schedule 1, Page 2

Interrogatory:
Please provide the current IESO/HONI Operating Agreement or its equivalent.

Response
The current IESO/HONI Operating Agreement to be provided in confidence to the OEB.

Witness: Andy Stenning

Building Owners and Managers Association (BOMA) INTERROGATORY #025

Hydro One has filed in confidence its Amended and Restated Operating Agreement with the Independent Electricity System Operator (IESO) dated April 25, 2014. The agreement contains terms and conditions describing each party's respective role, rights, and responsibilities with respect to the secure and reliable use and operation of the "transmission facilities", as described therein. In addition to provisions addressing the allocation of risk and responsibility and the governance structure applicable to the relationship, the document also contains information on special protection systems and operating parameters and practices.

Building Owners and Managers Association (BOMA) INTERROGATORY #026

Reference:

Exhibit B1, Tab 1, Schedule 1, Page 11

Interrogatory:

In light of comments about power quality from its customers, reflected in the customer satisfaction surveys during the stakeholder process, what steps does HONI plan to take to improve power quality at its delivery points? Please provide details (See Question 32 also).

Response:

Hydro One's power quality program is outlined in Section 2.7 of Exhibit B1, Tab 3, Schedule 3. Hydro One's capital plan for this program will increase the visibility of potential power quality events by installing additional power quality meters and reduce the risk of transient-induced tripping with the installation of capacitor switchers with transient suppression. Further details of these investments are presented in Section 2.7 of Exhibit B1, Tab 3, Schedule 3 with the cost breakdown presented in Exhibit I, Tab 3, Schedule 25.

Building Owners and Managers Association (BOMA) INTERROGATORY #027

Reference:

Exhibit B1, Tab 1, Schedule 3, Figure 2

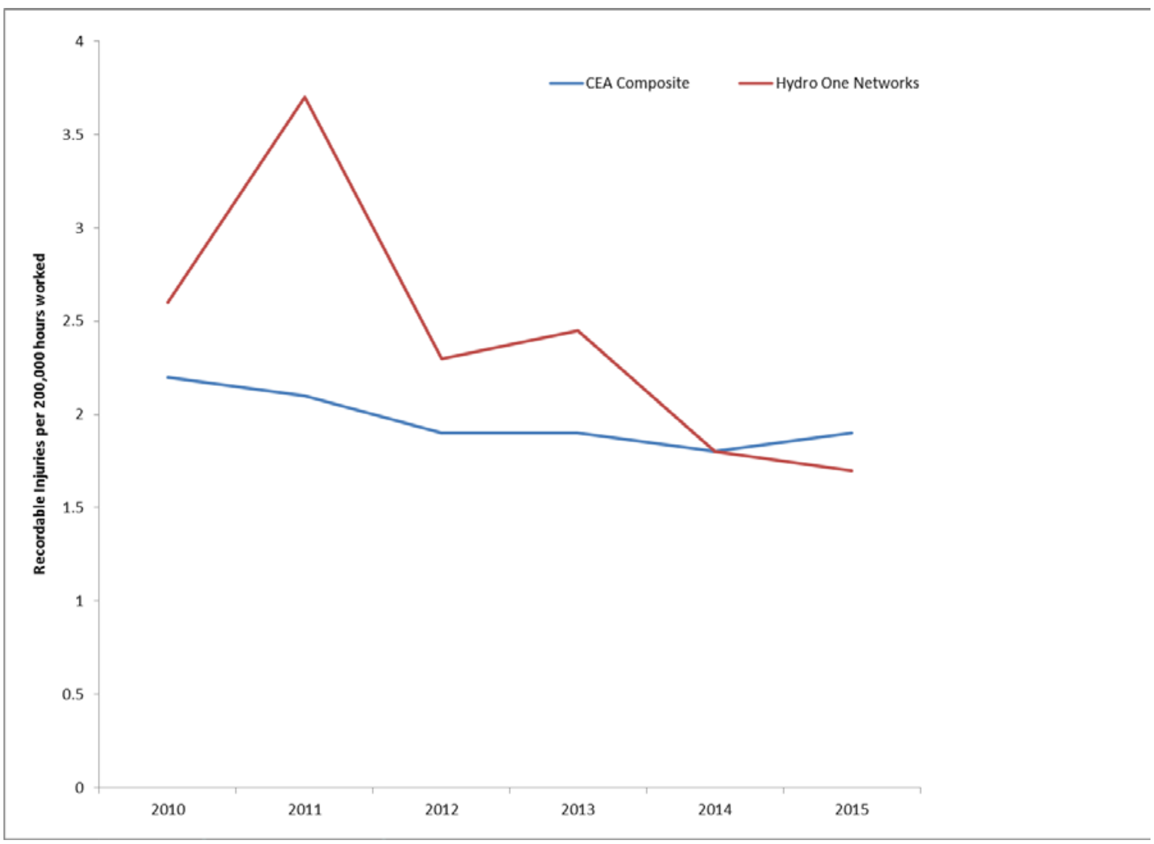
Interrogatory:

(a) Please provide figures for 2015 for both HONI and CEA composites.

(b) Please list the utilities that make up the CEA composite, and their relative contribution to that composite. How is the weighting done?

Response:

(a) Figure 2 graph has been updated with the 2015 performance below.



(b) The Canadian Electricity Association (CEA) does not share utility specific performance. The composite number represents the performance of: ATCO Electric – Distribution; BC Hydro; ENMAX Corporation; Hydro One Networks Inc; Hydro-Québec; Manitoba Hydro; New Brunswick Power; Nova Scotia Power Inc; Ontario Power Generation; and SaskPower, The composite number is the combined performance of all reporting utilities in the composite group with no weighting applied.

Building Owners and Managers Association (BOMA) INTERROGATORY #028

Reference:

Exhibit B1, Tab 1, Schedule 3, Page 17

Interrogatory:

Please explain the drop in customer satisfaction with the Ontario Grid Control Centre in 2015.

Response:

Please see exhibit B1, Tab1, Schedule 3, Page 16, lines 6-13. Further to the reference noted, Operating has received the preliminary results for the 2016 Ontario Grid Control Centre Transmission Customer Surveys with a satisfaction rate of 93%. The final report is expected in the fall of 2016.

Witness: Mike Penstone

Building Owners and Managers Association (BOMA) INTERROGATORY #029

Reference:

Exhibit B1, Tab 1, Schedule 3, Page 19

Interrogatory:

(a) Please provide a list of each of HONI's delivery points by category, eg. LDCs, Hydro One Distribution, large end users. Please distinguish between HONI owned stepdown transformers and transformer stations owned by transmission load customers.

(b) Page 22: Indicate which of the above delivery points are multi-circuit supplied and which are single-circuit supplied.

(c) Please provide the reliability data for each category of delivery point in (b) separately.

Response:

Please see Attachment #1 for responses.

Note: Hydro One shall not be responsible with respect to modifications made by any person to the data provided in the attached workbook.

Witness: Mike Penstone

Building Owners and Managers Association (BOMA) INTERROGATORY #030

Reference:

Cost of Capital

Interrogatory:

Please explain why Hydro One Transmission's actual ROEs have exceeded its allowed ROE by at least 200 basis points over each of the last several years.

Response:

Hydro One Transmission’s actual ROE have exceeded the allowed ROE by at least 200 basis points in 2012-2014, but not in 2015, as outlined below.

	2012	**2013**	**2014**	**2015**
Allowed ROE	9.42%	8.93%	9.36%	9.30%
Actual ROE	12.41%	13.22%	13.12%	10.93%
Variance	**2.99%**	**4.29%**	**3.76%**	**1.63%**

Actual ROE has exceeded allowed ROE by more than 200 basis points for the following major reasons.

In each of 2012-2014, favourable weather resulted in attaining a higher than planned peak demand and thus greater than expected revenues. In addition, over the course of 2012-2014, cumulative in-service additions were less than planned. This resulted in lower depreciation expense and rate base, which respectively affect the numerator and denominator of the calculation of actual ROE.

Specific to 2013, lower OM&A was mainly a result of the company recognizing a one-time property tax rebate. For 2014, lower OM&A was associated with receipt of insurance proceeds for the 2013 flooding at Richview TS and Manby TS.

2015 actual ROE did not exceed allowed ROE by more than 200 basis points.

Building Owners and Managers Association (BOMA) INTERROGATORY #031

Reference:

Exhibit B1, Tab 1, Schedule 3, Attachment 1, Page 7 of 10

Interrogatory:

Please explain what the first sentence in the paragraph numbered 3 means.

Response:

The sentence is referring to Section 6.6.2 of the Transmission System Code (TSC) and Section 2.6 Contestability Procedure of Hydro One's Transmission Connection Procedures (EB-2012-0031) which has been developed to meet the TSC requirements.

Building Owners and Managers Association (BOMA) INTERROGATORY #032

Reference:

Exhibit B1, Tab 2, Schedule 2, Page 9

Interrogatory:

"Overall power quality and transmission capacity were, aside from reliability, also raised as major issues, especially in the North".

(a) Please provide minutes of the Power Quality Working Group and the proposed steps it has made over the last five years to improve power quality for industrial customers and LDCs. Which of those recommendations has been implemented by HONI and at what cost? Has HONI paid all of the costs? Have the customers paid some of the costs? To what extent? Please discuss the nature of the power quality concerns and the extent to which have been alleviated, or still remain. How many of the ninety-six odd end users connected directly to HONI continue to raise power quality issues?

(b) Are there any non-industrial end users connected directly to transmission line? How many, what categories, eg. university, hospital, office complex, etc.? Are these parties members of the Power Quality Working Group?

Response:

(a) Please refer to Exhibit I, Tab 3, Schedule 17 for details on recommendations and initiatives related to the Power Quality Working Group. To date, the power quality ("PQ") initiatives have been relatively low cost. The costs of the facilitation of third party PQ audits has been solely borne by Hydro One; whereas the costs to leverage customer revenue meters as PQ meters has been borne by Hydro One with some nominal costs paid by customers.

With respect to the nature of power quality ("PQ") concerns, while there may be a variety of PQ issues, most of the power quality issues relate to voltage sags that cause tripping of customer equipment. Solutions can vary and depend on the specific circumstances. In some instances power quality issues have been alleviated by a combination of improved circuit performance and the use of PQ meter data to get a sense of the customer's resilience. The number of customers with active power quality investigations varies over time. Presently, there are five open power quality investigations.

(b) There are 5 non-industrial end users that are in the following categories:

- Professional, Scientific and Technical Services
- Information and Cultural Industries

These customers are not members of the Power Quality Working Group.

Building Owners and Managers Association (BOMA) INTERROGATORY #033

Reference:

Exhibit B1, Tab 2, Schedule 1

Interrogatory:

Please provide a copy of the customer satisfaction surveys conducted by:

(a) Northstar for each of the last five years;

(b) OGCC for each of the last five years.

Response:

Please see Attachments 1 to 8 to this response. Please note that (a) OGCC surveys were not conducted in 2011 and 2013 because, historically, surveys were conducted in alternating years, and (b) a mini-survey was done in place of the full survey in 2015.

Filed: 2016-08-31
EB-2016-0160
Exhibit I-2-33
Attachment 1
Page 1 of 11

LARGE CUSTOMER SCREENER
WAVE 1 2011 FINAL

Time Started:____________	Time Completed:__________	Elapsed Time:____________
Name:______________________________	Telephone: (_______)________________________	
Company Name:___________________________	Title:______________________________	
Address:____		
City:_______________	Province/State:___________	Postal/Zip Code:_______________
Interviewer:_______________________________	Date:_________________________	

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Sample:

A. TRANSMISSION Tx (asset TNAM/T-DNAM)
- Utility (LDC) 1
- Industrial 2

DISTRIBUTION Dx (asset DNAM)
- Utility (LDC) 3
- Retail.................................. 10

Tx/Dx
- Utility (LDC) 5
- Industrial 6

B. Market participant
- Yes................................... 1
- No 2

NOTE TO ALL: Screeners and W1 and W2 Method are all changed in 2010.

W1 E-mail Review Invitation and Link By Hydro One using IntelliPulse PINs

W1 Telephone Review Reminder By Hydro One Account Exec from List provided by IntelliPulse -

- Provide Review method choice to IntelliPulse

I am calling because IntelliPulse has indicated that you haven't had the opportunity to complete the on-line Satisfaction evaluation yet.

A. You have a few options for how you want to complete this evaluation. I can record how you would like to respond and let IntelliPulse know your preference. They can call you over the telephone, you have the email with the web site link so you can log onto the questionnaire and complete it online, or IntelliPulse can fax, or e-mail the questionnaire to you. Which would you prefer?

CIRCLE ONE:

Telephone .1	Do you have a particular date and time that you would like to book the Review with IntelliPulse, or have IntelliPulse call you to set a time for the Review? RECORD Date: _______________ Time: _____________a.m./p.m.
Web 2	Do you need me to re-send the original email to you? CONFIRM: e-mail address: .... If IntelliPulse hasn't received you completed Review by April 23, they will call you to complete it by telephone.

Fax 3	OBTAIN FAX NUMBER ( ) IntelliPulse will fax the questionnaire to you, along with a fax number for you to return your completed opinions. They will send the fax to you in the next couple days. If IntelliPulse hasn't received you completed Review by April 23, they will call you to complete it by telephone.
e-mail 5	OBTAIN e-mail ADDRESS: .... IntelliPulse will e-mail the questionnaire to you in the next couple of days. Once you receive it, would you please print it and then fax your opinions back to IntelliPulse. The fax number will be in the e-mail.
Refuse 6	**IF REFUSES SPRING ASK**: A. May we send the questionnaire to you in the Fall or can IntelliPulse call you in the Fall and have you answer the questions at that time? No ....1 ask B Email web link in Fall........................2 Telephone call in Fall 3
	B. IF REFUSES FALL ALSO, ASK: Would you allow IntelliPulse to call you to ask you to answer one single question on your overall satisfaction with Hydro One? **Note: IntelliPulse must make this call and obtain the score, the AE is not allowed to collect it.** Do you have a particular date and time that I can tell IntelliPulse to call you? RECORD Date: _______________ Time: _____________a.m./p.m.
Do not call again..........8	IF RESPONDENT ABSOLUTELY REFUSES AND STATES NEVER TO BE CALLED AGAIN, THANKS AND RECORD AND LOG ON PERMANENT REFUSAL LIST

THANK RESPONDENT AND REPEAT WHAT STEPS THEY HAVE CHOSEN AS A CONFIRMATION.

On-line version Introduction:
Hydro One commissioned IntelliPulse Inc., a Canadian research firm to conduct the 2011 customer satisfaction research.

Hydro One believes building a strong relationship with their customers is of prime importance. Collecting feedback from you is key to help understand your needs and get input on your current relationship with Hydro One.

For this review, please keep your organization's TRANSMISSION/DISTRIBUTION) service in mind, not your residential electricity service.

B. Hydro One appreciates the time you spend and the feedback you provide. The review takes about 10 to 15 minutes depending on your answers.

Telephone Review Call to On-line non-completes by IntelliPulse:

Hello, I'm __________________ calling on behalf of HYDRO ONE. I am from IntelliPulse, a Canadian market research firm. May I please speak with (INSERT NAME)?

(ARRANGE CALLBACK AS NEEDED. IF RESPONDENT NOT AVAILABLE, BUT HAS VOICE MAIL OR OTHER MESSAGE SYSTEM, LEAVE A MESSAGE THAT YOU ARE CALLING ABOUT THE REVIEW THEY WERE ASKED TO PARTICIPATE IN BY HYDRO ONE [THEY SHOULD HAVE RECEIVED A LETTER FROM THEIR ACCOUNT EXECUTIVE], LEAVE YOUR NAME AND MESSAGE THAT YOU WILL CALL BACK. LEAVE NO MORE THAN 2 OR 3)

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	DAY	DATE	TIME		DAY	DATE	TIME
CALLBACK #1				#11			
CALLBACK #2				#12			

(WHEN CONNECTED TO PERSON, CONTINUE.)

Your company should have received a letter and a telephone call from Hydro One about my call. Hydro One's goal is to achieve a superior level of customer service and they need feedback from customers like you. We're conducting a customer satisfaction review for them and would like to include your opinions. May I continue? (IF NECESSARY SAY; please let me assure you that we are not selling anything. Your answers are completely confidential and will be used for research purposes only.)

Telephone .1	IF RESPONDENT CANNOT CONTINUE NOW, ASK FOR DATE AND TIME WHEN YOU CAN CALL BACK AND FINISH THE REVIEW. Date: _______________ Time: _____________a.m./p.m.

C. Hydro One appreciates the time you spend and the feedback you provide. The evaluation takes about 10 to 15 minutes depending on your answers.

D. May I please proceed with asking you the questions and getting your answers over the telephone?
Yes …. START AT INTRODUCTION JUST BEFORE SECTION 1.
No….. IF RESPONDENT REFUSES TO ANSWER THE QUESTIONNAIRE, CONTINUE

E. Would it be alright to contact you in the fall to complete the review?
Yes … CONTINUE TO F
No …. RESPONDENT **NOT** TO BE CONTACT, GO TO QG

F. Would you prefer to be contacted by email with a website link or should I telephone you in the fall?
Web link …1
Telephone..2

RECORD W2 CONTACT METHOD. IN W2, RESPONDENT IS CONTACTED **ONLY** IN THEIR SELECTED WAY IN THE FALL.

Thank you. We will call/email you in September to complete the review at that time.

G. Would you be willing to tell me … Q12A AND READ QUESTION and RECORD ANSWER.
1-2a. How satisfied are you with HYDRO ONE overall? Would you say you are… (READ LIST)?

Very satisfied	Somewhat satisfied	Neither satisfied nor dissatisfied	Somewhat dissatisfied	Or, very dissatisfied	Don't know (DO NOT READ)
5	4	3	2	1	x

IF RESPONDENT ANSWERED Q12A ONLY, SKIP TO Q8.1 AND 8.2 AND RECORD ANSWERS.
Respondent is considered a complete and does NOT get put into the W2 sample

OR

IF RESPONDENT REFUSES TO ANSWER Q12A
Respondent is considered a REFUSAL and is NOT contacted in W2.

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IF RESPONDENT NOT CONTACTED IN W1 (DID NOT ANSWER THE PHONE), Respondent is put into the W2 sample and received a HO email in the Fall.

For this questionnaire, please keep your organization's CHECK SAMPLE TYPE TO INSERT (transmission/distribution/transmission and distribution) service in mind, not your residential electricity service.

Section 1: Overall Impressions of HYDRO ONE [1]

Please think about your overall impressions of HYDRO ONE.

1-1. Please rate your overall impression of the company on a one to ten scale, where **1** means your impression is **very unfavourable** and **10** means **very favourable**. You may use a 1, a 10, or any number in between.

Very favourable									Very unfavourable	Don't know (DO NOT READ)
10	9	8	7	6	5	4	3	2	1	11

1-2a. How satisfied are you with HYDRO ONE overall? Would you say you are... (READ LIST)?

Very satisfied	Somewhat satisfied	Neither satisfied nor dissatisfied	Somewhat dissatisfied	Or, very dissatisfied	Don't know (DO NOT READ)
5	4	3	2	1	x

1-1a. What is the main issue that Hydro One could address to meet your business needs? **DO NOT READ – DO NOT SHOW PRECODES ON WEB QUESTIONS OR ON PAPER QUESTIONNAIRE**

Communications/proactive phone calls
Reliability
Accessibility
Directory of contacts
Cost
Other specify ____________________

IF LDC, SKIP TO Q1-4.
ASK Q1-3 OF ALL INDUSTRIAL/RETAIL.

1-3. Based on your expectations of service from a utility, whether it is the gas company, phone company or electricity company, in general do you think Hydro One's performance as a utility is....?

Much better than expected	Somewhat better	Just as expected	Somewhat worse	Or, much worse than expected of a utility	Don't know (DO NOT READ)
5	4	3	2	1	x

[1] 'Detailed" next to question number indicates question asked **only** in the long version of the questionnaire. No 'detailed' indicates the question is asked in the **both** long and short questionnaire versions.

1-4. Considering the overall quality of the transmission/distribution service you get from HYDRO ONE, how would you rate the value for the money provided by HYDRO ONE. Please use a scale of 1 to 10, where a **1** means **poor value** and a **10** means **excellent value.** You may use a 1, a 10 or any number in between. (RECORD ONE RESPONSE ONLY.)

10 - Excellent value	9	8	7	6	5	4	3	2	1 - Poor value	11 Don't Know (do Not Read)

1-4b. Using a scale of 1 to 10, where **1** means **not at all valuable** and **10** means **very valuable**, how valuable are each of the following from a transmission provider?

10 – very valuable	9	8	7	6	5	4	3	2	1 – Not at all valuable	11 Don't Know (do Not Read)

[RANDOMIZE ORDER OF OFFERING]

1-4b1 Capital Investment
1-4b2 Social Media Communication (i.e. Facebook, Twitter)
1-4b3 Power Quality
1-4b4 Electronic Data Interchange
1-4b5 Website
1-4b6 Engineering / Consulting Services
1-4b7 Customer Portal (Sharepoint)

1-5. Thinking now about your ability to access HYDRO ONE to discuss your questions or problems either over the phone or through a representative, are you very satisfied, somewhat satisfied, neither satisfied not dissatisfied, somewhat dissatisfied, or very dissatisfied?

Very satisfied	Somewhat satisfied	Neither satisfied nor dissatisfied	Somewhat dissatisfied	Or, very dissatisfied	Don't know (DO NOT READ)
5	4	3	2	1	x

1-6. Please think of what you expect the performance of a utility should be. For the next statements do you think HYDRO ONE performs much better than expected, somewhat better, just as expected, somewhat worse or much worse than expected. Let's start with… (INSERT FIRST QUESTION). REPEAT SCALE IF NECESSARY.

	Much better than expected	Somewhat better	Just as expected	Somewhat worse	Or, much worse than expected of a utility	Don't know (DO NOT READ)
.1 How well they maintain their electricity systems, including the towers, lines and stations	5	4	3	2	1	x
.3 The quality of the electricity you receive– that is always full power without fluctuations or momentary interruptions	5	4	3	2	1	x

1-7. Please indicate how much you agree or disagree with each of the following statements. To do this, please use a 1 to 10 scale, where a **1** means you **disagree completely**, and a **10** means you **agree completely**. You may use a 1, a 10 or any number in between to rate each statement.

WRITE IN RATING

	(1 TO 10)
.1 You have a reliable supply of electricity	____________
.3 Hydro One is aware of the condition of the equipment that serves your business	____________
.20. Hydro One promptly delivers written documents such as memos, agreements or proposals when promised	____________
.5 Hydro One is fair.	____________
.6 Hydro One keeps commitments	____________
.8 Hydro One is concerned about their customers.	____________
.10 Hydro One has a flexible attitude towards your business	____________
.13 When asked, Hydro One is willing to provide information that is important to you	____________
.14 Hydro One is non-bureaucratic	____________
.15 Hydro One responds to customer questions promptly	____________
.16 Hydro One makes decisions promptly.	____________
If Q1-7.16 code 1 to 6 ask 1-7.16o. Which decisions are especially slow? **DO NOT CODE, ATTACH VERBATIMS TO INDIVIDUAL NAMES IN EXCEL**	____________
.18 Hydro One minimizes the number of power outages in your area	____________
.19 In negotiations, Hydro One considers the needs of both parties	____________
.23 They are financially well-managed	____________

Section 2: Power Outages

Planned outages section

Thinking about times when there was no electricity available ...**FOR INDUSTRIALS/RETAIL SAY at your company ... FOR LDC SAY at Hydro One delivery points...** due to planned outages when Hydro One needed to repair or replace equipment or upgrade service.

2-3a. In the past year, have you experienced any power outages due to planned outages, FOR INDUSTRIAL/RETAIL SAY at your company FOR LDC SAY at Hydro One delivery points?

Yes.............1	
No.............2	SKIP TO INTRO TO UNPLANNED OUTAGES Q 2-4a
Don't Know...3	Is there someone else in the company who can provide this information? Who is that person? ________________________________

2-3.3. How satisfied are you with the way Hydro One handles planned outage(s)? Would you say you are... (READ LIST)?

Very satisfied	Somewhat satisfied	Neither satisfied nor dissatisfied	Somewhat dissatisfied	Or, very dissatisfied	Don't know (DO NOT READ)	No contact (volunteered)
5	4	3	2	1	x	y

Unplanned outages

Thinking now about times when there was no electricity available ... **FOR INDUSTRIALS/RETAIL SAY at your company ...FOR LDC SAY at Hydro One delivery points** ... due to unplanned outages that occurred on the facilities owned by Hydro One due to an accident, weather conditions or equipment failure.

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2-4a. In the past year, have you experienced any power outages due to unplanned outages, …FOR INDUSTRIAL/RETAIL SAY at your company …FOR LDC, SAY at Hydro One delivery points?

Yes…………..1	
No…………...2	SKIP TO 2-5.1a Fluctuations
Don't Know…3	Is there someone else in the company who can provide this information? Who is that person? ________________________________

2-4.2 How satisfied are you with the way Hydro One handles unplanned outage(s)? Would you say you are… (READ LIST)?

Very satisfied	Somewhat satisfied	Neither satisfied nor dissatisfied	Somewhat dissatisfied	Or, very dissatisfied	Don't know (DO NOT READ)
5	4	3	2	1	x

Ask if Q2-4.2 code 1 or 2
2-4.2o. What are your most pressing issues with the way unplanned outages are handled? **DO NOT CODE, ATTACH VERBATIMS TO INDIVIDUAL NAMES IN EXCEL**

2-4.9 Now, using a 1 to 10 scale, where a 1 means you **disagree completely** and a 10 means you **agree completely**, please rate your experience with the unplanned outage contact on each of the following statements. You may use a 1, a 10, or any number in between to rate each statement.

	WRITE IN RATING (1 TO 10)
.3 They provide accurate information about the expected duration of the outage	________________
.4 They are forthcoming with the information they have about the outage	________________
.5 They restore power quickly following a power outage	________________

If score 1 to 6 in q2-4.9-4, ask:
2-4.9o What information has not been forthcoming?
Estimated time of restoration……………………………………1
Cause of outage……………………………………………………2
Other (specific)……………………………………………………x
____

Fluctuations

ASK ALL

2-5.1b. In the past year …**FOR INDUSTRIALS/RETAIL SAY** has **your company… FOR LDC SAY have Hydro One delivery points…** experienced READ LIST RECORD YES OR NO FOR EACH

	Yes…1	**No…2**	**Don't Know**
1. Transients			
2. Interruptions			
3. Sag / Undervoltage			
4. Swell / Overvoltage			
5. Waveform distortion			
6. Voltage fluctuations			
7. Frequency variations			

ASK ALL RESPONDENTS
2-5.5. Using a 1 to 10 scale, where a **1** means you **disagree completely** and a **10** means you **agree completely**, please rate the handling of power quality and reliability problems by Hydro One on each of the following statements.

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	WRITE IN RATING (1 TO 10)
.1 Hydro One is proactive in identifying future sources of power quality and reliability problems	
.2 When requested, Hydro One conducts detailed analysis of their data to determine the root cause to learn how to improve your service	
.3 Hydro One works hard to minimize power quality issues	

Section 3: Communication

Please think now about written and verbal communications.

3-1. How satisfied are you with the way HYDRO ONE communicates with your company?

Very satisfied	Somewhat satisfied	Neither satisfied nor dissatisfied	Somewhat dissatisfied	Or, very dissatisfied	Don't know (DO NOT READ)
5	4	3	2	1	x

Ask if Q1 code 1 or 2

3-1o. What are your most pressing issues with the way Hydro One communicates with your company? **DO NOT CODE, ATTACH VERBATIMS TO INDIVIDUAL NAMES IN EXCEL**

____

Thinking now about Procedure and Policy Information, using a 1 to 10 scale, where a **1** means you **disagree completely** and a **10** means you **agree completely**, please rate the company on the statement.

	WRITE IN RATING (1 TO 10)
3-5.2 In meetings and presentations, the Hydro One procedure and policy information is explained well	________

How would you rate the following Procedure and Policy Information using a scale of 1 to 10 where **1** is **very poor** and **10** is **excellent**?

	WRITE IN RATING (1 TO 10)
3-5.3 The frequency of information on Hydro One procedure and policy	
3-5.4 The communication quality of procedure and policy information	

3-5 Think of what you expect the communications of a utility should be for the amount of information regarding procedures and policies, does HYDRO ONE perform ...**READ LIST?**

Much better than expected	Somewhat better	Just as expected	Somewhat worse	Or, much worse than expected of a utility	Don't know (DO NOT READ)
5	4	3	2	1	[ ]x

Section 4: Customer Relations / Account Executives

Now we would like to understand some of your contact experiences.

4-1. Which of the following business contacts do you have with HYDRO ONE? (CHECK ALL THAT APPLY). PAUSE AFTER EACH CONTACT FOR A RESPONSE

ONLY ASK THIS OF Dx or TxDx and LDC: The Hydro One Business Customer Centre	2

Operations customer support	3
Customer contracts	4
Hydro One web site	5
An Account Executive, this is your assigned person who you can contact if your company has a problem, to discuss an outage, to plan for new service or to ask questions about service, or who calls you	6
Other (SPECIFY)___________________________________	

ONLY ASK Q4-3 IF Dx or TxDx and LDC
ASK Q 4-3 IF Q4-1=2
4-3. How satisfied are you with the your most recent contact experience with the Business Customer Centre ~~agent~~?

Very satisfied	Somewhat satisfied	Neither satisfied nor dissatisfied	Somewhat dissatisfied	Or, very dissatisfied	Don't know (DO NOT READ)
5	4	3	2	1	x

4-3o. If Somewhat or Very Dissatisfied to Q4-3
Please give me (us) some examples of why you are not satisfied with the Business Customer Centre?
____

ONLY ASK Q4-31a IF Dx or TxDx and LDC
ASK Q 4-31a IF Q4-1=2
4-31a. Thinking about your dedicated Business Customer Centre agent that handles your BILLING inquiries. How satisfied are you with him or her for dealing with your billing inquiries? READ LIST

Very satisfied	Somewhat satisfied	Neither satisfied nor dissatisfied	Somewhat dissatisfied	Or, very dissatisfied	Don't know (DO NOT READ)	Not Applicable
5	4	3	2	1	x	x

4-31. If Somewhat or Very Dissatisfied to Q4-31a
Please give me (us) some examples of why you are not satisfied with your dedicated Business Customer agent?
____

IF Dx Industrial/Retail SKIP TO NEXT SECTION 5

If Tx or TxDx or any LDC ASK
Please think about your Account Executive at HYDRO ONE.

4-4**.** In the past year, have you been in contact with your Account Executive for any reason?
Yes....1 CONTINUE
No..... 2 SKIP TO SECTION 5

4-7. How satisfied are you with your most recent contact experience with your Account Executive?

Very satisfied	Somewhat satisfied	Neither satisfied nor dissatisfied	Somewhat dissatisfied	Or, very dissatisfied	Don't know (DO NOT READ)
5	4	3	2	1	x

4-8. Using a 1 to 10 scale, where a 1 means you **disagree completely** and a 10 means you **agree completely**, please rate your experience with your Account Executive on each of the following statements. Your Account Executive ...(READ LIST)

	WRITE IN RATING (1 TO 10)

.1 Is always available when you need him or her	_________
.2 Always returns your calls in a timely manner	_________
.3 Gets you the assistance you need quickly	_________
.4 Provides all the information you need when you call	_________
.5 Follows up to make sure your question or problem is resolved	_________
.6 Is knowledgeable about HYDRO ONE company policy	_________

Section 5: Billing

Ask FOR Dx LDC and TxDx LDC CUSTOMERS ONLY:

Next I'd like to know your opinion about HYDRO ONE'S bills.

5-1. How satisfied are you with the way HYDRO ONE handles its billing?

Very satisfied	Somewhat satisfied	Neither satisfied nor dissatisfied	Somewhat dissatisfied	Or, very dissatisfied	Don't know (DO NOT READ)
5	4	3	2	1	x

IF CODE 1,2 OR 3 TO Q5-1 ASK:

5-1o. What improvements would you like to see in the way Hydro One handles its billing?

____

Section 11: Final Comments

ASK ALL

11-1 Do you have any further comments that you would like to make? **DO NOT CODE, ATTACH VERBATIMS TO INDIVIDUAL NAMES IN EXCEL**

____

Section 8: Access Permissions

That completes our formal questions.

8-1. Hydro One Management is committed to better understanding their customer needs to improve the value that Hydro One can deliver to their customers. As such, they are asking for your permission to see the results of your specific interview in addition to the aggregate research results to help them better work toward meeting your company's specific needs. May we provide your responses to Hydro One management?

Yes....1 SKIP TO 8-2 No....2 CONTINUE

If no, ask

8-1a What are your particular concerns with providing permission? DO NOT CODE, PROVIDE VERBATIM RESPONSES

___________________________ SKIP TO END

8-2. May Hydro One Management provide your responses to your Account Executive to review and set up a follow-up meeting with you?

Yes...1 No....2

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Remember, we will only share your responses with Hydro One if you responded "YES" to the previous questions. If you responded "NO", we will not share your individual results with Hydro One. However, to verify your completion of the survey, please complete the following information...

Thank you very much for your participation.

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NORTHSTAR research partners

STUDY: Hydro One LDC, End User & Generator

Time Started:_________	Time Completed:_____________	Elapsed Time:_______________
Name:____________________________	Telephone: (______) _______________________	
Company Name:_________________________________	Title:_____________________________	
Address:____		
City:__________	Province:_____________	Postal Code:_______________
Interviewer:_______________________________	Date:_____________________________	

I am calling because Acrobat has indicated that you haven't had the opportunity to complete the online Satisfaction review yet.

A. You have a few options for how you want to complete this evaluation. I can record how you would like to respond and let Acrobat know your preference. They can call you over the telephone, you have the email with the web site link so you can log onto the questionnaire and complete online, or Acrobat can fax, or e-mail the questionnaire to you. Which would you prefer?

Telephone .1	Do you have a particular date and time that you would like to book the Review with Acrobat, or have Acrobat call you to set a time for the Review? RECORD Date:_________Time: a.m./p.m
Web…………2	Do you need me to re-send the original email to you? CONFIRM: E-mail address… If Acrobat hasn't received your completed Review by April 20, they will call you to complete it by telephone.
Fax…………..3	OBTAIN FAX NUMBER( ) Acrobat will fax the questionnaire to you, along with fax number for you to return your completed opinions. They will send the day to you in the next couple days. If Acrobat hasn't received your completed Review by April 20, they will call you to complete it by telephone.
e-mail………5	OBTAIN e-mail ADDRESS: Acrobat will e-mail the questionnaire to you in the next couple of days. Once you receive it, would you please print it and then fax your opinions back to Acrobat. The fax number will be in the email.
Refuse……..6	IF REFUSES SPRING ASK: A. May we send the questionnaire to you in the Fall or can Acrobat call you in the Fall and have you answer the questions at that time? No…………………………………………………..1 ask B Email web link in Fall..................2 Telephone call in Fall……………………..3
	B. IF REFUSES FALL ALSO, ASK: Would you allow Acrobat to call you to ask you to answer one single question on your overall satisfaction with Hydro One? Note: Acrobat must make this call and obtain the score; the AE is not allowed to collect it. Do you have a particular date and time that I can tell Acrobat to call you? RECORD Date: Time: a.m/p.m
DO not call again……….8	IF RESPONDENT ABSOLUTELY REFUSES AND STATES NEVER TO BE CALLED AGAIN, THANKS AND RECORD AND LOG ON PERMANENT REFUSAL LIST.

THANK RESPONDENT AND REPEAT WHAT STEPS THEY HAVE CHOSEN AS A CONFIRMATION.

On-line version Introduction:
HYDRO ONE has commissioned Northstar Research Partners Inc. and their partner, Acrobat Research, both Canadian research firms, to conduct the 2012 customer satisfaction research.

HYDRO ONE believes building a strong relationship with their customers is of prime importance. Collecting feedback from you is key to helping Hydro One understand your needs. Your feedback allows Hydro One to better understand the areas they can improve on, and assists them in streamlining their processes to ensure they are meeting your expectations.

B. I am calling because Acrobat has indicated that you haven't had the opportunity to complete the online satisfaction review yet. Hydro One appreciates the time you spend and the feedback you provide. The review takes about 16 minutes depending on your answers.

Telephone Review Call to On-line non-completes by Acrobat:

Hello, I'm ______________ calling on behalf of HYDRO ONE. I am from Acrobat, a Canadian market research firm. May I please speak with (INSERT NAME)?

(ARRANGE CALLBACK AS NEEDED. IF RESPONDENT IS NOT AVAILABLE, BUT HAS VOICE MAIL OR OTHER MESSAGE SYSTEM, LEAVE A MESSAGE THAT YOU ARE CALLING ABOUT THE PREVIEW THEY WERE ASKED TO PARTICIPATE IN BY HYDRO ONE [THEY SHOULD HAVE RECEIVED A LETTER FROM THEIR ACCOUNT EXECUTIVE], LEAVE YOUR NAME AND MESSAGE THAT YOU WILL CALL BACK. LEAVE NO MORE THAN 2 OR 3)

Call Back	DAY	DATE	TIME
#1			
#2			
#3			

(WHEN CONNECTED TO PERSON, CONTINUE)

Your company should have received a letter and a telephone call from HYDRO ONE about my call. HYDRO ONE'S goal is to achieve a superior level of customer service and they need feedback from customers like you. We're conducting a customer satisfaction review for them and would like to include your opinions. May I continue? (IF NECESSARY SAY; please let me assure you that we are not selling anything. Your answers are completely confidential and will be used for research purposes only.)

Telephone .1	IF RESPONDENT CANNOT CONTINUE NOW, ASK FOR THE DATE AND TIME WHEN YOU CAN CALL BACK AND FINISH THE REVIEW. Date:______________ Time:__________ a.m/p.m

C. Hydro One appreciates the time you spend and the feedback you provide. The evaluation takes about 16 minutes depending on your answers.

D. May I please proceed with asking you the questions and getting your answers over the telephone?
Yes……START AT INTRODUCTION JUST BEFORE SECTION 1.
No……..IF RESPONDENT REFUSES TO ANSWER THE QUESTIONNAIRE, CONTINUE.

E. Would it be alright to contact you in the fall to complete the review?
Yes……CONTINUE TO F
No……..RESPONDENT NOT TO BE CONTACTED, GO TO QG

F. Would you prefer to be contacted by email with the website link or should I telephone you in the fall?
Web link…1
Telephone…2

RECORD W2 CONTACT METHOD. IN W2, RESPONDENT IS CONTACTED ONLY IN THEIR SELECTED WAY IN THE FALL.

Thank you. We will call/email you in September to complete the review at that time.

G. Would you be willing to tell me…Q1-2A AND READ QUESTION and RECORD ANSWER?

1-2A. Overall, how satisfied are you with Hydro One? Would you say you are…(Read List)?

Don't Know (DO NOT READ)	Or, Very dissatisfied	Somewhat dissatisfied	Neither satisfied nor dissatisfied	Somewhat Satisfied	Very Satisfied
6	1	2	3	4	5

IF RESPONDENT ANSWERED Q1-2A ONLY, SKIP TO SECTION 8 (Q42) AND RECORD ANSWERS. Respondent is considered a complete and does not get put into the W2 sample IF RESPONDENT REFUSES TO ANSWER Q12A, Respondent is considered a REFUSAL and is not contacted in W2.

Section 1: Customer / Business Context

Over the past several years, Ontario's industrial and energy sectors have gone through significant changes. This has affected the programs and services provided by various organizations. In order stay in touch with these changing needs and to be able to respond effectively, HYDRO ONE is seeking your perspectives on a number of aspects. Please be candid in your comments.

Let's begin.

[ONLY ASK Q1 to LDC OR GENERATOR. IF END USER SKIP TO SECTION 2]

Q1. Would you please identify from the following list the top three challenges that your organization / facility will face in the coming year to fulfill its energy sector role? [READ APPROPRIATE LIST]

LDC ONLY	
Installing smart meters	☐
Updating infrastructure	☐
Controlling prices/costs	☐
Human resources	☐
Being able to move quickly to follow government direction for sector	☐
Updating call system or customer system	☐
Updating billing systems	☐
Other, Specify: ______________________________	☐

GENERATOR ONLY	
Achieving Return on Investment	☐
Acquiring resources	☐
Generation prices that you are clearing at	☐
Costs	☐
Outage accommodation	☐
Other, Specify: ______________________________	☐

Section 2: Overall Impressions of Hydro One

Q2. Overall, how satisfied are you with HYDRO ONE? Would you say you are…? (READ LIST)?

Don't Know (DO NOT READ)	Or, Very dissatisfied	Somewhat dissatisfied	Neither satisfied nor dissatisfied	Somewhat Satisfied	Very Satisfied
6	1	2	3	4	5

Q3. What is the main need or issue that HYDRO ONE could address to support your business needs? [DO NOT READ – DO NOT SHOW PRECODES ON WEB QUESTIONS OR ON PAPER QUESTIONNAIRE]

DO NOT READ	
Reliability/line maintenance	☐
Restoration times	☐
Costs	☐
Accessibility	☐
Outage planning/outage notifications	☐
Communications / proactive phone calls	☐
Responsiveness, follow up	☐
Planned outages	☐
Responsiveness and follow up	☐
Other, Specify: ______________________________	☐
No issues	

Q4. Please rate your overall impression of HYDRO ONE on a one to ten scale, where 1 means your impression is **very unfavourable** and 10 means **very favourable**. You may use a 1, a 10, or any number in between.

Very Unfavourable							*Very Favourable*		
1	2	3	4	5	6	7	8	9	10
☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Q5. HYDRO ONE is a major part of the electricity sector. Based on your experience, what are the key factors that shape your opinion of the organization….[CODE RESPONSES}

DO NOT READ	
Delivery charge/pricing	☐
Delivery reliability	☐
People/human interaction	☐
Ease of doing business	☐
Power quality	☐
Sound equipment and infrastructure	☐
Planning and investing for the future	☐
Other, Specify: ______________________________	☐

Please think about your overall impressions of HYDRO ONE.

Q6. Based on your expectations of service from a utility, whether it is the gas company, phone company or electricity company, in general do you think HYDRO ONE's performance as a utility is....?

Don't Know (DO NOT READ)	Much worse than expected	Somewhat worse	Just as expected	Somewhat better	Much better than expected
6	1	2	3	4	5

Q7. Compared to other utilities you've dealt with, do you think HYDRO ONE performs much better than expected, somewhat better, just as expected, somewhat worse or much worse than expected on …(INSERT FIRST QUESTION)? REPEAT SCALE IF NECESSARY.

[RANDOMIZE]	Don't Know (DO NOT READ)	Much worse than expected	Somewhat worse	Just as expected	Somewhat better	Much better than expected
Maintenance of their electricity systems, including the towers, lines and stations	6	1	2	3	4	5
Quality of delivered electricity (i.e. without fluctuations or momentary interruptions)	6	1	2	3	4	5

Q8. Thinking over the last 2 years, has your relationship with HYDRO ONE …?

Improved	☐
Stayed the same	☐
Gotten worse	☐
[DON'T READ] Don't know / No opinion	☐

ASK ONLY OF LDC OR END USER

Q9. [ASK ONLY IF END USER OR LDC] Considering the overall quality of the transmission / distribution service you get from HYDRO ONE, how would you rate the value for money provided by HYDRO ONE? Please use a scale of 1 to 10, where a 1 means **poor value** and a 10 means **excellent value**. You may use a 1, a 10 or any number in between. (RECORD ONE RESPONSE ONLY.)

Poor value							*Excellent value*		
1	2	3	4	5	6	7	8	9	10
☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Q10. How would you rate HYDRO ONE on the following specific attributes? Please use a 1 to 10 scale, where a 1 means you **disagree completely**, and a 10 means you **agree completely**. You may use a 1, a 10 or any number in between to rate each statement.

[RANDOMIZE]	*Disagree Completely*							*Agree Completely*		
	1	2	3	4	5	6	7	8	9	10
A Keeping commitments	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
IF "Keeping commitments" RATED 1-6, ASK: When we asked about keeping commitments you gave a score of __(enter score from q 2.10_1), What commitments were you thinking of? What commitments are you thinking of? [DO NOT CODE, ATTACH VERBATIMS TO INDIVIDUAL NAMES IN EXCEL]										
B Treating you as a valued customer	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
C Respecting the needs of your business/operations	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
D END USER/LDC ASK Providing accurate billing and services GENERATOR ASK Providing accurate billing and settlement services	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
E END USERS ONLY ASK Offering customized conservation advice to allow you to control your costs	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
F Promptly delivering written documents such as memos, agreements or proposals when promised	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
G Demonstrating concern for customers like you	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
H Understanding your business needs for electricity CHECK SAMPLE TYPE TO INSERT (transmission/ distribution/transmission and distribution)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
I Demonstrating flexibility in decisions affecting your business/organization	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
J LDC ONLY ASK Acting as a partner with you in electricity delivery	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
K Negotiating to meet the needs of	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

both parties										
L Providing relevant information	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
M Making decisions promptly	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
IF "Making decisions promptly" RATED 1-6, ASK: When we asked about making decisions promptly you gave a score of __(enter score from q 2.10_1). What decisions were especially slow? What decisions were especially slow? [DO NOT CODE, ATTACH VERBATIMS TO INDIVIDUAL NAMES IN EXCEL]										
N Being fair	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
IF "Being fair" RATED 1-6, ASK When we asked about HYDRO ONE being fair you gave a score of __(enter score from q 2.10_1). In what way have they not been fair?" In what way have they not been fair? [DO NOT CODE, ATTACH VERBATIMS TO INDIVIDUAL NAMES IN EXCEL]										
O Being non-bureaucratic	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Section 3: Delivery and Transmission

We would like to move the conversation towards the delivery of electricity.

Q11. How would you rate HYDRO ONE on the following dimensions? Please use a 1 to 10 scale, where a 1 means you **disagree completely**, and a 10 means you **agree completely**. You may use a 1, a 10 or any number in between to rate each statement.

[RANDOMIZE]	*Disagree Completely*							*Agree Completely*		
	1	2	3	4	5	6	7	8	9	10
END USER/LDC ASK: HYDRO ONE operators know your local system conditions GENERATOR ASK: HYDRO ONE operators know your local plant conditions	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
END USER/LDC ASK You have a reliable delivery of electricity GENERATOR ASK You have a reliable transmission connection	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
HYDRO ONE is aware of the condition	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

of the equipment that serves your business/system										
HYDRO ONE minimizes the number of power outages in your area/affecting your business	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

<u>Outages</u>

Please think about times when your electricity delivery was interrupted …[FOR END USER SAY] at your company … [FOR LDC/GENERATOR SAY] at HYDRO ONE delivery points… by outages where HYDRO ONE needed to repair or replace equipment or upgrade service. Others may have occurred on facilities owned by HYDRO ONE due to an accident, weather conditions or equipment failure.

Q12. In the past year, have you experienced any planned or unplanned <u>power outages</u>, [FOR END USER SAY] at your company [FOR LDC/GENERATOR SAY] at HYDRO ONE delivery points?

[ROTATE]	YES		NO		Don't Know [DO NOT READ]
Planned Outages	☐	ASK Q13	☐	SKIP TO Q18	☐
Unplanned Outages	☐	ASK Q14	☐	SKIP TO Q18	☐

Q13. [IF YES TO PLANNED OUTAGES AT Q12] How would you rate HYDRO ONE on the following dimensions during <u>planned outages</u>? Please use a 1 to 10 scale, where a 1 means you **disagree completely**, and a 10 means you **agree completely**. You may use a 1, a 10 or any number in between to rate each statement.

[RANDOMIZE]	*Disagree Completely*							*Agree Completely*		
	1	2	3	4	5	6	7	8	9	10
Providing notice to your organization	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Returning equipment to service when promised	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Q14. [IF YES TO UNPLANNED OUTAGES AT Q12] How would you rate HYDRO ONE on the following dimensions during <u>unplanned outages</u>? Please use a 1 to 10 scale, where a 1 means you **disagree completely**, and a 10 means you **agree completely**. You may use a 1, a 10 or any number in between to rate each statement.

[RANDOMIZE]	*Disagree Completely*							*Agree Completely*		

	1	2	3	4	5	6	7	8	9	10
Duration of unplanned outages	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Providing accurate information on the duration of outages	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Being transparent with the information they have about the outage	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Restoring power quickly following an outage	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Providing regular status updates	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

__Customer Briefings__ – ASK ALL WHO HAD UNPLANNED OUTAGE AT Q12

Q15. A customer briefing is a formal written account of an electrical interruption showing timelines, analysis and follow up recommendations. Have you received any Customer Briefings from Ontario Grid Control Centre in the past year?

Yes	☐	
No/ [DON'T READ] Don't know	☐	SKIP TO SECTION 4

Q16. How satisfied are you with the Customer Briefings of electrical interruptions? Are you…

Don't Know (DO NOT READ)	Or, Very dissatisfied	Somewhat dissatisfied	Neither satisfied nor dissatisfied	Somewhat Satisfied	Very Satisfied
6	1	2	3	4	5

Q17. Why did you provide that rating? DO NOT CODE, VERBATIM ONLY

__Section 4: Account Management / Customer Relations__

Now we would like to understand some of your contact experiences with HYDRO ONE.

Q18. Thinking now about your ability to access HYDRO ONE to discuss your questions or problems either over the phone or through a representative, are you very satisfied, somewhat satisfied, neither satisfied nor dissatisfied, somewhat dissatisfied, or very dissatisfied?

Don't Know (DO NOT READ)	Or, Very dissatisfied	Somewhat dissatisfied	Neither satisfied nor dissatisfied	Somewhat Satisfied	Very Satisfied
6	1	2	3	4	5

Q19. In the past year which of the following business contacts did you have with HYDRO ONE? (CHECK ALL THAT APPLY). PAUSE AFTER EACH CONTACT FOR A RESPONSE

[ONLY ASK THIS OF Dx or TxDx]: The HYDRO ONE Business Customer Centre	☐	2
Operations customer support	☐	3
Customer contracts	☐	4
HYDRO ONE web site	☐	5
An Account Executive	☐	6
Other, Specify: ______________________________	☐	

Q21. [IF USED BUSINESS CUSTOMER CENTRE IN Q19 & LDC] How satisfied are you with the your most recent contact with the Business Customer Centre?

Don't Know (DO NOT READ)	Or, Very dissatisfied	Somewhat dissatisfied	Neither satisfied nor dissatisfied	Somewhat Satisfied	Very Satisfied
6	1	2	3	4	5

Q21a. [IF 21 =1 OR 2] Please provide some examples of why you are not satisfied with the Business Customer Centre? DO NOT CODE, VERBATIM ONLY

Q22. [IF Q19=2] How satisfied are you with the Business Customer Centre agent dealing with your billing inquiries? READ LIST

Don't Know (DO NOT READ)	Or, Very dissatisfied	Somewhat dissatisfied	Neither satisfied nor dissatisfied	Somewhat Satisfied	Very Satisfied
6	1	2	3	4	5

Q22a. [IF 22=1 OR 2] Please provide some examples of why you are not satisfied with your Business Customer agent? DO NOT CODE, VERBATIM ONLY

IF Dx END USER SKIP TO NEXT SECTION 5

(IF USED ACCOUNT EXECUTIVE IN Q19 & If Tx or TxDx or any LDC) Please think about your Account Executive at HYDRO ONE.

Q24. How satisfied are you with your most recent contact experience with your Account Executive?

Don't Know (DO NOT READ)	Or, Very dissatisfied	Somewhat dissatisfied	Neither satisfied nor dissatisfied	Somewhat Satisfied	Very Satisfied
6	1	2	3	4	5

Q25. (IF USED ACCOUNT EXECUTIVE IN Q19 & ASK If Tx or TxDx or any LDC) Using a 1 to 10 scale, where a 1 means you **disagree completely** and a 10 means you **agree completely**, please rate your experience with your Account Executive on each of the following statements. Your Account Executive …(READ LIST)

[RANDOMIZE]	*Disagree Completely*							*Agree Completely*		
	1	2	3	4	5	6	7	8	9	10
Is always available when you need him or her	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Always returns your calls in a timely manner	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Gets you the assistance you need quickly	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Provides all the assistance you need quickly	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Follows up to make sure your question or problem is resolved	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Is knowledgeable about HYDRO ONE company policy	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Knows how to direct you to the appropriate person in HYDRO ONE if necessary	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Has the authority to make decisions	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Ask FOR Dx and TxDx CUSTOMERS ONLY: IF GENERATOR DO NOT ASK Q26

Now we would like to ask about HYDRO ONE'S billing process.

Q26. How satisfied are you with the way HYDRO ONE handles its billing?

Don't Know (DO NOT READ)	Or, Very dissatisfied	Somewhat dissatisfied	Neither satisfied nor dissatisfied	Somewhat Satisfied	Very Satisfied
6	1	2	3	4	5

26a. [IF 26=1 OR 2] What improvements would you like to see in the way HYDRO ONE handles its billing? DO NOT CODE, VERBATIM ONLY

Section 5: Communication

Now we would like to change the focus to written and verbal communications.

Q27. Overall how satisfied are you with the way HYDRO ONE communicates with your company?

Don't Know (DO NOT READ)	Or, Very dissatisfied	Somewhat dissatisfied	Neither satisfied nor dissatisfied	Somewhat Satisfied	Very Satisfied
6	1	2	3	4	5

Q27a. [IF 27=1 OR 2] How could HYDRO ONE improve the way it communicates with your organization? DO NOT CODE, VERBATIM ONLY

Q28. What methods of communication do you prefer? [READ LIST]

Bulletin	☐
Workshops	☐
Newsletter	☐
Account Executive	☐
Special Topic Briefing	☐

Social Media (i.e. Facebook, Twitter)	☐
Other, Specify: ______________________	☐

Q29. In the past 12 months, have you made a complaint to HYDRO ONE about its services?

Yes	☐	
No	☐	SKIP TO Q32

Q30. How satisfied were you with the outcome? Were you…(READ OPTIONS)

Don't Know (DO NOT READ)	Or, Very dissatisfied	Somewhat dissatisfied	Neither satisfied nor dissatisfied	Somewhat Satisfied	Very Satisfied
6	1	2	3	4	5

Q31. In your opinion was the complaint resolved…(READ OPTIONS)

Completely	☐
Partially	☐
Not at all	☐
Still pending	☐

Q32. How would you rate the following Procedure and Policy Information using a scale of 1 to 10 where 1 is very poor and 10 is very excellent?

[RANDOMIZE]	*Very Poor*							*Very Excellent*		
	1	2	3	4	5	6	7	8	9	10
HYDRO ONE'S explanation of procedure and policy information	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
The frequency of information on HYDRO ONE procedure and policy	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
The communication quality of procedure and policy information	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Section 6: Value added services

Now we would like to discuss HYDRO ONE and its services.

Q33. Your organization deals with various service providers. Many have capabilities and services that you could leverage to support your business. What characteristics would you seek for them to become a "trusted advisor" to your organization? [DO NOT CODE, VERBATIM ONLY]

Q34. Given how you just defined a trusted advisor, do you consider HYDRO ONE to be a trusted advisor to your organization?

Yes	☐
No	☐

Q35. HYDRO ONE has a range of capabilities that may be of interest to your organization. Please indicate whether or not you are interested or already use, if provided, any of the following programs or services.

[RANDOMIZE]	Yes	No	Already Use
Power Quality Services	☐	☐	☐
Electronic Invoicing	☐	☐	☐
Electronic Funds Transfer	☐	☐	☐
Capital Investment Programs	☐	☐	☐
Energy Management Consulting Services	☐	☐	☐
Public Website	☐	☐	☐
Customer Web portal	☐	☐	☐
Training Services, (Topic_______________)	☐	☐	☐
Other, Specify: ______________________	☐	☐	☐

IF TRAINING SERVICES SELECTED YES OR ALREADY USE AT Q35, FOLLOW UP WITH:
(IF YES) What type of training services are you interested in? (IF ALREADY USE) What type of training services do you use?

IF OTHER SELECTED YES OR ALREADY USE AT Q35, FOLLOW UP WITH:
(IF YES) What other programs or services are you interested in?
(IF ALREADY USE) What other programs or services do you already use?

Q36. Does your organization have any interest in a products catalogue of value added services from HYDRO ONE?

Yes	☐
No	☐

Section 7: Final Comments – ASK ALL

Q37. Do you have any further comments that you would like to make to HYDRO ONE about its service and programs? DO NOT CODE, ATTACH VERBATIM TO INDIVIDUAL NAMES IN EXCEL.

Section 8: Access Permissions

That completes our formal questions.

Q38. May we provide your individual responses to HYDRO ONE management?

Yes	☐	
No	☐	ASK Q38a and then SKIP TO Q40

Q38a. [IF NO at Q38] What are your particular concerns with providing permission? DO NOT CODE, ROVIDE RESPONSES. AFTER ANSWERING, SKIP TO END.

Q39. May Hydro One Management provide your individual responses to your Account Executive to review and set up a follow-up meeting with you?

Yes	☐
No	☐

Q40. In order to verify completion of the survey, please fill in the following information.

Name	______________________

Job title	______________________
Company name	______________________
Company location	______________________

Online ending:
Remember, we will only share your responses with HYDRO ONE if you responded "YES" to the previous question.

If you responded "NO", we will not share your individual results with HYDRO ONE.

Thank you very much for your participation.

Date of interview

PROGRAMMER: BE SURE TO APPEND ALL DATA FROM THE CUSTOMER SAMPLE FILE TO THE INTERVIEW RECORD EXCEPT THOSE THAT IDENTIFY THE CUSTOMER SUCH AS NAME, PHONE NUMBER, ACCOUNT NUMBER.

NORTHSTAR
Advancing Understanding

STUDY: Hydro One LDC, End User & Generator - 2013

Time Started:________	Time Completed:____________	Elapsed Time:______________
Name:__________________________	Telephone: (______)______________________	
Company Name:______________________________	Title:___________________________	
Address:____		
City:_________	Province:____________	Postal Code:______________
Interviewer:____________________________	Date:___________________________	

I am calling because Acrobat has indicated that you haven't had the opportunity to complete the online Satisfaction review yet.

A. You have a few options for how you want to complete this evaluation. I can record how you would like to respond and let Acrobat know your preference. They can call you over the telephone, you have the email with the web site link so you can log onto the questionnaire and complete online, or Acrobat can fax, or e-mail the questionnaire to you. Which would you prefer?

Telephone .1	Do you have a particular date and time that you would like to book the Review with Acrobat, or have Acrobat call you to set a time for the Review? RECORD Date:_________Time: a.m./p.m
Web…………2	Do you need me to re-send the original email to you? CONFIRM: E-mail address… If Acrobat hasn't received your completed Review by April 20, they will call you to complete it by telephone.
Fax…………..3	OBTAIN FAX NUMBER( ) Acrobat will fax the questionnaire to you, along with fax number for you to return your completed opinions. They will send the day to you in the next couple days. If Acrobat hasn't received your completed Review by April 20, they will call you to complete it by telephone.
e-mail………5	OBTAIN e-mail ADDRESS: Acrobat will e-mail the questionnaire to you in the next couple of days. Once you receive it, would you please print it and then fax your opinions back to Acrobat. The fax number will be in the email.
Refuse……..6	IF REFUSES SPRING ASK: A. May we send the questionnaire to you in the Fall or can Acrobat call you in the Fall and have you answer the questions at that time? No………………………………………………..1 ask B Email web link in Fall...................2 Telephone call in Fall……………………..3
	B. IF REFUSES FALL ALSO, ASK: Would you allow Acrobat to call you to ask you to answer one single question on your overall satisfaction with Hydro One? Note: Acrobat must make this call and obtain the score; the AE is not allowed to collect it. Do you have a particular date and time that I can tell Acrobat to call you? RECORD Date: Time: a.m/p.m
DO not call again……….8	IF RESPONDENT ABSOLUTELY REFUSES AND STATES NEVER TO BE CALLED AGAIN, THANKS AND RECORD AND LOG ON PERMANENT REFUSAL LIST.

THANK RESPONDENT AND REPEAT WHAT STEPS THEY HAVE CHOSEN AS A CONFIRMATION.

NORTHSTAR
Advancing Understanding

On-line version Introduction:
HYDRO ONE has commissioned Northstar Research Partners Inc. and their partner, Acrobat Research, both Canadian research firms, to conduct the 2012 customer satisfaction research.

HYDRO ONE believes building a strong relationship with their customers is of prime importance. Collecting feedback from you is key to helping Hydro One understand your needs. Your feedback allows Hydro One to better understand the areas they can improve on, and assists them in streamlining their processes to ensure they are meeting your expectations.

B. I am calling because Acrobat has indicated that you haven't had the opportunity to complete the online satisfaction review yet. Hydro One appreciates the time you spend and the feedback you provide. The review takes about 16 minutes depending on your answers.

Telephone Review Call to On-line non-completes by Acrobat:

Hello, I'm ______________ calling on behalf of HYDRO ONE. I am from Acrobat, a Canadian market research firm. May I please speak with (INSERT NAME)?

(ARRANGE CALLBACK AS NEEDED. IF RESPONDENT IS NOT AVAILABLE, BUT HAS VOICE MAIL OR OTHER MESSAGE SYSTEM, LEAVE A MESSAGE THAT YOU ARE CALLING ABOUT THE PREVIEW THEY WERE ASKED TO PARTICIPATE IN BY HYDRO ONE [THEY SHOULD HAVE RECEIVED A LETTER FROM THEIR ACCOUNT EXECUTIVE], LEAVE YOUR NAME AND MESSAGE THAT YOU WILL CALL BACK. LEAVE NO MORE THAN 2 OR 3)

Call Back	DAY	DATE	TIME
#1			
#2			
#3			

(WHEN CONNECTED TO PERSON, CONTINUE)

Your company should have received a letter and a telephone call from HYDRO ONE about my call. HYDRO ONE'S goal is to achieve a superior level of customer service and they need feedback from customers like you. We're conducting a customer satisfaction review for them and would like to include your opinions. May I continue? (IF NECESSARY SAY; please let me assure you that we are not selling anything. Your answers are completely confidential and will be used for research purposes only.)

Telephone .1	IF RESPONDENT CANNOT CONTINUE NOW, ASK FOR THE DATE AND TIME WHEN YOU CAN CALL BACK AND FINISH THE REVIEW. Date:______________ Time:__________ a.m/p.m

C. Hydro One appreciates the time you spend and the feedback you provide. The evaluation takes about 16 minutes depending on your answers.

D. May I please proceed with asking you the questions and getting your answers over the telephone?
Yes……START AT INTRODUCTION JUST BEFORE SECTION 1.
No……..IF RESPONDENT REFUSES TO ANSWER THE QUESTIONNAIRE, CONTINUE.

E. Would it be alright to contact you in the fall to complete the review?
Yes……CONTINUE TO F
No……..RESPONDENT NOT TO BE CONTACTED, GO TO QG

F. Would you prefer to be contacted by email with the website link or should I telephone you in the fall?
Web link…1
Telephone…2

RECORD W2 CONTACT METHOD. IN W2, RESPONDENT IS CONTACTED ONLY IN THEIR SELECTED WAY IN THE FALL.

Thank you. We will call/email you in September to complete the review at that time.

G. Would you be willing to tell me…Q1-2A AND READ QUESTION and RECORD ANSWER?

1-2A. Overall, how satisfied are you with Hydro One? Would you say you are…(Read List)?

Don't Know (DO NOT READ)	Or, Very dissatisfied	Somewhat dissatisfied	Neither satisfied nor dissatisfied	Somewhat Satisfied	Very Satisfied
6	1	2	3	4	5

IF RESPONDENT ANSWERED Q1-2A ONLY, SKIP TO SECTION 8 (Q42) AND RECORD ANSWERS.

Respondent is considered a complete and does not get put into the W2 sample

IF RESPONDENT REFUSES TO ANSWER Q12A, Respondent is considered a REFUSAL and is not contacted in W2.

Section 1: Customer / Business Context

Q1. REMOVED

Section 2: Overall Impressions of Hydro One

Q2. Overall, how satisfied are you with HYDRO ONE? Would you say you are…? (READ LIST)?

Don't Know (DO NOT READ)	Or, Very dissatisfied	Somewhat dissatisfied	Neither satisfied nor dissatisfied	Somewhat Satisfied	Very Satisfied
6	1	2	3	4	5

Q3. What is the main need or issue that HYDRO ONE could address to support your business needs? [DO NOT READ – DO NOT SHOW PRECODES ON WEB QUESTIONS OR ON PAPER QUESTIONNAIRE]

DO NOT READ	
Reliability/line maintenance	☐
Restoration times	☐
Costs	☐
Accessibility	☐
Outage planning/outage notifications	☐
Communications / proactive phone calls	☐
Responsiveness, follow up	☐
Planned outages	☐
Responsiveness and follow up	☐
Other, Specify: ________________________________	☐
No issues	

Q4. Please rate your overall impression of HYDRO ONE on a one to ten scale, where 1 means your impression is very unfavourable and 10 means very favourable. You may use a 1, a 10, or any number in between.

Very Unfavourable							*Very Favourable*		
1	2	3	4	5	6	7	8	9	10
☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Q5 REMOVED

Please think about your overall impressions of HYDRO ONE.

Q6. Based on your expectations of service from a utility, whether it is the gas company, phone company or electricity company, in general do you think HYDRO ONE's performance as a utility is....?

Don't Know (DO NOT READ)	Much worse than expected	Somewhat worse	Just as expected	Somewhat better	Much better than expected
6	1	2	3	4	5

Q7. Compared to other utilities you've dealt with, do you think HYDRO ONE performs much better than expected, somewhat better, just as expected, somewhat worse or much worse than expected on …(INSERT FIRST QUESTION)? REPEAT SCALE IF NECESSARY.

[RANDOMIZE]	Don't Know (DO NOT READ)	Much worse than expected	Somewhat worse	Just as expected	Somewhat better	Much better than expected
Maintenance of their electricity systems, including the towers, lines and stations	6	1	2	3	4	5
Quality of delivered electricity (i.e. without fluctuations or momentary interruptions)	6	1	2	3	4	5

Q8. Thinking over the last 2 years, has your relationship with HYDRO ONE …?

Improved	☐
Stayed the same	☐
Gotten worse	☐
[DON'T READ] Don't know / No opinion	☐

ASK ONLY OF LDC OR END USER

Q9. [ASK ONLY IF END USER OR LDC] Considering the overall quality of the transmission / distribution service you get from HYDRO ONE, how would you rate the value for money provided by HYDRO ONE? Please use a scale of 1 to 10, where a 1 means **poor value** and a 10 means **excellent value**. You may use a 1, a 10 or any number in between. (RECORD ONE RESPONSE ONLY.)

Poor value							*Excellent value*		
1	2	3	4	5	6	7	8	9	10
☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Q10. How would you rate HYDRO ONE on the following specific attributes? Please use a 1 to 10 scale, where a 1 means you **disagree completely**, and a 10 means you **agree completely**. You may use a 1, a 10 or any number in between to rate each statement.

[RANDOMIZE]	*Disagree Completely*							*Agree Completely*		
	1	2	3	4	5	6	7	8	9	10
A Keeping commitments	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
IF "Keeping commitments" RATED 1-6, ASK: When we asked about keeping commitments you gave a score of __(enter score from q 2.10_1), What commitments were you thinking of? What commitments are you thinking of? [DO NOT CODE, ATTACH VERBATIMS TO INDIVIDUAL NAMES IN EXCEL]										
B Treating you as a valued customer	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
C Respecting the needs of your business/operations	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
GENERATOR ASK Providing accurate billing and settlement services	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
E END USERS ONLY ASK Offering customized conservation advice to allow you to control your costs	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
F Promptly delivering written documents such as memos, agreements or proposals when promised	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
G Demonstrating concern for customers like you	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
H Understanding your business needs for electricity CHECK	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

SAMPLE TYPE TO INSERT (transmission/ distribution/transmission and distribution)										
I Demonstrating flexibility in decisions affecting your business/organization	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
J LDC ONLY ASK Acting as a partner with you in electricity delivery	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
K Negotiating to meet the needs of both parties	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
L Providing relevant information	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
M Making decisions promptly	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
IF “Making decisions promptly” RATED 1-6, ASK: When we asked about making decisions promptly you gave a score of __(enter score from q 2.10_1). What decisions were especially slow? What decisions were especially slow? [DO NOT CODE, ATTACH VERBATIMS TO INDIVIDUAL NAMES IN EXCEL]										
N Being fair	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
IF “Being fair” RATED 1-6, ASK When we asked about HYDRO ONE being fair you gave a score of __(enter score from q 2.10_1). In what way have they not been fair?” In what way have they not been fair? [DO NOT CODE, ATTACH VERBATIMS TO INDIVIDUAL NAMES IN EXCEL]										
O Being non-bureaucratic	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Section 3: Delivery and Transmission

We would like to move the conversation towards the delivery of electricity.

Q11. How would you rate HYDRO ONE on the following dimensions? Please use a 1 to 10 scale, where a 1 means you **disagree completely**, and a 10 means you **agree completely**. You may use a 1, a 10 or any number in between to rate each statement.

[RANDOMIZE]	*Disagree Completely*							*Agree Completely*		
	1	2	3	4	5	6	7	8	9	10
END USER/LDC ASK You have a reliable delivery of electricity GENERATOR ASK You have a reliable transmission connection	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
HYDRO ONE is aware of the condition of the equipment that serves your business/system	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
HYDRO ONE minimizes the number of power outages in your area/affecting your business	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Outages

Please think about times when your electricity delivery was interrupted …[FOR END USER SAY] at your company … [FOR LDC/GENERATOR SAY] at HYDRO ONE delivery points… by outages where HYDRO ONE needed to repair or replace equipment or upgrade service. Others may have occurred on facilities owned by HYDRO ONE due to an accident, weather conditions or equipment failure.

Q12. In the past year, have you experienced any planned or unplanned power outages, [FOR END USER SAY] at your company [FOR LDC/GENERATOR SAY] at HYDRO ONE delivery points?

[ROTATE]	YES		NO		Don't Know [DO NOT READ]
Planned Outages	☐	ASK Q13	☐	SKIP TO Q18	☐
Unplanned Outages	☐	ASK Q14	☐	SKIP TO Q18	☐

Q13. [IF YES TO PLANNED OUTAGES AT Q12] How would you rate HYDRO ONE on the following dimensions during planned outages? Please use a 1 to 10 scale, where a 1 means you **disagree completely**, and a 10 means you **agree completely**. You may use a 1, a 10 or any number in between to rate each statement.

[RANDOMIZE]	*Disagree Completely*							*Agree Completely*		
	1	2	3	4	5	6	7	8	9	10
Providing notice to your organization	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Returning equipment to service when promised	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

13b Please think of what you expect the performance of a utility should be. For the next statements do you think OUTAGE PLANNING performs much better than expected, somewhat better, just as expected, somewhat worse or much worse than expected.

	Much worse than expected	Somewhat worse	Just as expected	Somewhat better	Much better than expected	Don't know (DO NOT READ)
The number of planned outages	1	2	3	4	5	6
The outage planning process	1	2	3	4	5	6

Q14. [IF YES TO UNPLANNED OUTAGES AT Q12] How would you rate HYDRO ONE on the following dimensions during unplanned outages? Please use a 1 to 10 scale, where a 1 means you **disagree completely**, and a 10 means you **agree completely**. You may use a 1, a 10 or any number in between to rate each statement.

[RANDOMIZE]	*Disagree Completely*							*Agree Completely*		
	1	2	3	4	5	6	7	8	9	10
Duration of unplanned outages	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Providing accurate information on the duration of outages	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Being transparent with the information they have about the outage	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Restoring power quickly following an outage	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Providing regular status updates	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Q15. REMOVED
Q16. REMOVED
Q17. REMOVED

Section 4: Account Management / Customer Relations

Now we would like to understand some of your contact experiences with HYDRO ONE.

Q18. Thinking now about your ability to access HYDRO ONE to discuss your questions or problems either over the phone or through a representative, are you very satisfied, somewhat satisfied, neither satisfied nor dissatisfied, somewhat dissatisfied, or very dissatisfied?

Don't Know (DO NOT READ)	Or, Very dissatisfied	Somewhat dissatisfied	Neither satisfied nor dissatisfied	Somewhat Satisfied	Very Satisfied
6	1	2	3	4	5

Q19. In the past year which of the following business contacts did you have with HYDRO ONE? (CHECK ALL THAT APPLY). PAUSE AFTER EACH CONTACT FOR A RESPONSE

[ONLY ASK THIS OF Dx or TxDx]: The HYDRO ONE Business Customer Centre	☐	2
Operations customer support	☐	3
Customer contracts	☐	4
HYDRO ONE web site	☐	5
An Account Executive	☐	6
Other, Specify: ________________________________	☐	

Q21. [IF USED BUSINESS CUSTOMER CENTRE IN Q19 & LDC] How satisfied are you with the your most recent contact with the Business Customer Centre?

Don't Know (DO NOT READ)	Or, Very dissatisfied	Somewhat dissatisfied	Neither satisfied nor dissatisfied	Somewhat Satisfied	Very Satisfied
6	1	2	3	4	5

Q21a. [IF 21 =1 OR 2] Please provide some examples of why you are not satisfied with the Business Customer Centre? DO NOT CODE, VERBATIM ONLY

Q22. REMOVED
Q22a. REMOVED

IF Dx END USER SKIP TO NEXT SECTION 5

(IF USED ACCOUNT EXECUTIVE IN Q19 & If Tx or TxDx or any LDC) Please think about your Account Executive at HYDRO ONE.

Q24. How satisfied are you with your most recent contact experience with your Account Executive?

Don't Know (DO NOT READ)	Or, Very dissatisfied	Somewhat dissatisfied	Neither satisfied nor dissatisfied	Somewhat Satisfied	Very Satisfied
6	1	2	3	4	5

Q25. (IF USED ACCOUNT EXECUTIVE IN Q19 & ASK If Tx or TxDx or any LDC) Using a 1 to 10 scale, where a 1 means you **disagree completely** and a 10 means you **agree completely**, please rate your experience with your Account Executive on each of the following statements. Your Account Executive …(READ LIST)

[RANDOMIZE]	*Disagree Completely*							*Agree Completely*		
	1	2	3	4	5	6	7	8	9	10
Is always available when you need him or her	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Always returns your calls in a timely manner	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Provides all the assistance you need quickly	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Follows up to make sure your question or problem is resolved	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Knows how to direct you to the appropriate person in HYDRO ONE if necessary	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Has the authority to make decisions	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Ask FOR Dx and TxDx CUSTOMERS ONLY: IF GENERATOR DO NOT ASK Q26

Now we would like to ask about HYDRO ONE'S billing process.

Q26. How satisfied are you with the way HYDRO ONE handles its billing?

Don't Know (DO NOT READ)	Or, Very dissatisfied	Somewhat dissatisfied	Neither satisfied nor dissatisfied	Somewhat Satisfied	Very Satisfied
6	1	2	3	4	5

26a. [IF 26=1 OR 2] What improvements would you like to see in the way HYDRO ONE handles its billing? DO NOT CODE, VERBATIM ONLY

Section 5: Communication

Now we would like to change the focus to written and verbal communications.

Q27. Overall how satisfied are you with the way HYDRO ONE communicates with your company?

Don't Know (DO NOT READ)	Or, Very dissatisfied	Somewhat dissatisfied	Neither satisfied nor dissatisfied	Somewhat Satisfied	Very Satisfied
6	1	2	3	4	5

Q27a. REMOVED
Q28. REMOVED

Q29. In the past 12 months, have you made a complaint to HYDRO ONE about its services?

Yes	☐	
No	☐	SKIP TO Q32

29B. What was your complaint about? CODE and analyze against Q31

Q30. REMOVED

Q31. In your opinion was the complaint resolved…(READ OPTIONS)

Completely	☐
Partially	☐
Not at all	☐
Still pending	☐

Q32. REMOVED

Section 6: Value added services

Now we would like to discuss HYDRO ONE and its services.

Q33. Your organization deals with various service providers. Many have capabilities and services that you could leverage to support your business. What characteristics would you seek for them to become a "trusted advisor" to your organization? [DO NOT CODE, VERBATIM ONLY]

Q34. Given how you just defined a trusted advisor, do you consider HYDRO ONE to be a trusted advisor to your organization?

Yes	☐
No	☐

Q35A, B AND C TO BE ASKED IN 2015 ONLY

Q35. HYDRO ONE has a range of capabilities that may be of interest to your organization. Please indicate whether or not you are interested or already use, if provided, any of the following programs or services.

[RANDOMIZE]	Yes	No	Already Use
Power Quality Services	☐	☐	☐
Electronic Invoicing	☐	☐	☐
Electronic Funds Transfer	☐	☐	☐
Capital Investment Programs	☐	☐	☐
Energy Management Consulting Services	☐	☐	☐
Public Website	☐	☐	☐
Customer Web portal	☐	☐	☐
Training Services, (Topic________________)	☐	☐	☐
Other, Specify: ______________________	☐	☐	☐

Q35B. IF TRAINING SERVICES SELECTED YES OR ALREADY USE AT Q35, FOLLOW UP WITH: (IF YES) What type of training services are you interested in? (IF ALREADY USE) What type of training services do you use?

Q35C. IF OTHER SELECTED YES OR ALREADY USE AT Q35, FOLLOW UP WITH:
(IF YES) What other programs or services are you interested in?
(IF ALREADY USE) What other programs or services do you already use?

Q36. REMOVED

Section 7: Final Comments – ASK ALL

Q37. Do you have any further comments that you would like to make to HYDRO ONE about its service and programs? DO NOT CODE, ATTACH VERBATIM TO INDIVIDUAL NAMES IN EXCEL.

Section 8: Access Permissions

That completes our formal questions.

Q38. May we provide your individual responses to HYDRO ONE management?

Yes	☐	
No	☐	ASK Q38a and then SKIP TO Q40

Q38a. REMOVED

Q39. May Hydro One Management provide your individual responses to your Account Executive to review and set up a follow-up meeting with you?

Yes	☐
No	☐

Q40. In order to verify completion of the survey, please fill in the following information.

Name	______________________
Job title	______________________
Company name	______________________
Company location	______________________

Online ending:
Remember, we will only share your responses with HYDRO ONE if you responded "YES" to the previous question.

If you responded "NO", we will not share your individual results with HYDRO ONE.

Thank you very much for your participation.

PROGRAMMER: BE SURE TO APPEND ALL DATA FROM THE CUSTOMER SAMPLE FILE TO THE INTERVIEW RECORD EXCEPT THOSE THAT IDENTIFY THE CUSTOMER SUCH AS NAME, PHONE NUMBER, ACCOUNT NUMBER.

THIS SURVEY WAS USED IN 2014

NORTHSTAR
Advancing Understanding

Feb 12, 2013

STUDY: Hydro One LDC, End User & Generator - 2013

Time Started:_________ Time Completed:_____________	Elapsed Time:_______________
Name:____________________________ Telephone: (______)________________________	
Company Name:_________________________________	Title:______________________________
Address:____	
City:__________ Province:_____________	Postal Code:_______________
Interviewer:________________________________	Date:______________________________

NORTHSTAR
Advancing Understanding

I am calling because Acrobat has indicated that you haven't had the opportunity to complete the online Satisfaction review yet.

A. You have a few options for how you want to complete this evaluation. I can record how you would like to respond and let Acrobat know your preference. They can call you over the telephone, you have the email with the web site link so you can log onto the questionnaire and complete online, or Acrobat can fax, or e-mail the questionnaire to you. Which would you prefer?

Telephone .1	Do you have a particular date and time that you would like to book the Review with Acrobat, or have Acrobat call you to set a time for the Review? RECORD Date:_________Time: a.m./p.m
Web…………2	Do you need me to re-send the original email to you? CONFIRM: E-mail address… If Acrobat hasn't received your completed Review by April 20, they will call you to complete it by telephone.
Fax…………..3	OBTAIN FAX NUMBER( ) Acrobat will fax the questionnaire to you, along with fax number for you to return your completed opinions. They will send the day to you in the next couple days. If Acrobat hasn't received your completed Review by April 20, they will call you to complete it by telephone.
e-mail………5	OBTAIN e-mail ADDRESS: Acrobat will e-mail the questionnaire to you in the next couple of days. Once you receive it, would you please print it and then fax your opinions back to Acrobat. The fax number will be in the email.
Refuse……..6	IF REFUSES SPRING ASK: A. May we send the questionnaire to you in the Fall or can Acrobat call you in the Fall and have you answer the questions at that time? No…………………………………………………..1 ask B Email web link in Fall...................2 Telephone call in Fall……………………..3
	B. IF REFUSES FALL ALSO, ASK: Would you allow Acrobat to call you to ask you to answer one single question on your overall satisfaction with Hydro One? Note: Acrobat must make this call and obtain the score; the AE is not allowed to collect it. Do you have a particular date and time that I can tell Acrobat to call you? RECORD Date: Time: a.m/p.m
DO not call again……….8	IF RESPONDENT ABSOLUTELY REFUSES AND STATES NEVER TO BE CALLED AGAIN, THANKS AND RECORD AND LOG ON PERMANENT REFUSAL LIST.

THANK RESPONDENT AND REPEAT WHAT STEPS THEY HAVE CHOSEN AS A CONFIRMATION.

NORTHSTAR
Advancing Understanding

On-line version Introduction:
HYDRO ONE has commissioned Northstar Research Partners Inc. and their partner, Acrobat Research, both Canadian research firms, to conduct the 2012 customer satisfaction research.

HYDRO ONE believes building a strong relationship with their customers is of prime importance. Collecting feedback from you is key to helping Hydro One understand your needs. Your feedback allows Hydro One to better understand the areas they can improve on, and assists them in streamlining their processes to ensure they are meeting your expectations.

B. I am calling because Acrobat has indicated that you haven't had the opportunity to complete the online satisfaction review yet. Hydro One appreciates the time you spend and the feedback you provide. The review takes about 16 minutes depending on your answers.

Telephone Review Call to On-line non-completes by Acrobat:

Hello, I'm _______________ calling on behalf of HYDRO ONE. I am from Acrobat, a Canadian market research firm. May I please speak with (INSERT NAME)?

(ARRANGE CALLBACK AS NEEDED. IF RESPONDENT IS NOT AVAILABLE, BUT HAS VOICE MAIL OR OTHER MESSAGE SYSTEM, LEAVE A MESSAGE THAT YOU ARE CALLING ABOUT THE PREVIEW THEY WERE ASKED TO PARTICIPATE IN BY HYDRO ONE [THEY SHOULD HAVE RECEIVED A LETTER FROM THEIR ACCOUNT EXECUTIVE], LEAVE YOUR NAME AND MESSAGE THAT YOU WILL CALL BACK. LEAVE NO MORE THAN 2 OR 3)

Call Back	DAY	DATE	TIME
#1			
#2			
#3			

(WHEN CONNECTED TO PERSON, CONTINUE)

Your company should have received a letter and a telephone call from HYDRO ONE about my call. HYDRO ONE'S goal is to achieve a superior level of customer service and they need feedback from customers like you. We're conducting a customer satisfaction review for them and would like to include your opinions. May I continue? (IF NECESSARY SAY; please let me assure you that we are not selling anything. Your answers are completely confidential and will be used for research purposes only.)

Telephone .1	IF RESPONDENT CANNOT CONTINUE NOW, ASK FOR THE DATE AND TIME WHEN YOU CAN CALL BACK AND FINISH THE REVIEW. Date:______________ Time:__________ a.m/p.m

C. Hydro One appreciates the time you spend and the feedback you provide. The evaluation takes about 16 minutes depending on your answers.

D. May I please proceed with asking you the questions and getting your answers over the telephone?
Yes……START AT INTRODUCTION JUST BEFORE SECTION 1.
No……..IF RESPONDENT REFUSES TO ANSWER THE QUESTIONNAIRE, CONTINUE.

E. Would it be alright to contact you in the fall to complete the review?
Yes……CONTINUE TO F
No……..RESPONDENT NOT TO BE CONTACTED, GO TO QG

F. Would you prefer to be contacted by email with the website link or should I telephone you in the fall?
Web link…1
Telephone…2

RECORD W2 CONTACT METHOD. IN W2, RESPONDENT IS CONTACTED ONLY IN THEIR SELECTED WAY IN THE FALL.

Thank you. We will call/email you in September to complete the review at that time.

G. Would you be willing to tell me…Q1-2A AND READ QUESTION and RECORD ANSWER?

1-2A. Overall, how satisfied are you with Hydro One? Would you say you are…(Read List)?

Don't Know (DO NOT READ)	Or, Very dissatisfied	Somewhat dissatisfied	Neither satisfied nor dissatisfied	Somewhat Satisfied	Very Satisfied
6	1	2	3	4	5

IF RESPONDENT ANSWERED Q1-2A ONLY, SKIP TO SECTION 8 (Q42) AND RECORD ANSWERS.

Respondent is considered a complete and does not get put into the W2 sample

IF RESPONDENT REFUSES TO ANSWER Q12A, Respondent is considered a REFUSAL and is not contacted in W2.

Section 1: Customer / Business Context

Q1. REMOVED

Section 2: Overall Impressions of Hydro One

Q2. Overall, how satisfied are you with HYDRO ONE? Would you say you are…? (READ LIST)?

Don't Know (DO NOT READ)	Or, Very dissatisfied	Somewhat dissatisfied	Neither satisfied nor dissatisfied	Somewhat Satisfied	Very Satisfied
6	1	2	3	4	5

Q3. What is the main need or issue that HYDRO ONE could address to support your business needs? [DO NOT READ – DO NOT SHOW PRECODES ON WEB QUESTIONS OR ON PAPER QUESTIONNAIRE]

DO NOT READ	
Reliability/line maintenance	☐
Restoration times	☐
Costs	☐
Accessibility	☐
Outage planning/outage notifications	☐
Communications / proactive phone calls	☐
Responsiveness, follow up	☐
Planned outages	☐
Responsiveness and follow up	☐
Other, Specify: ________________________________	☐
No issues	

Q4. Please rate your overall impression of HYDRO ONE on a one to ten scale, where 1 means your impression is very unfavourable and 10 means very favourable. You may use a 1, a 10, or any number in between.

Very Unfavourable							*Very Favourable*		
1	2	3	4	5	6	7	8	9	10
☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Q5 REMOVED

Please think about your overall impressions of HYDRO ONE.

Q6. Based on your expectations of service from a utility, whether it is the gas company, phone company or electricity company, in general do you think HYDRO ONE's performance as a utility is....?

Don't Know (DO NOT READ)	Much worse than expected	Somewhat worse	Just as expected	Somewhat better	Much better than expected
6	1	2	3	4	5

Q7. Compared to other utilities you've dealt with, do you think HYDRO ONE performs much better than expected, somewhat better, just as expected, somewhat worse or much worse than expected on …(INSERT FIRST QUESTION)? REPEAT SCALE IF NECESSARY.

[RANDOMIZE]	Don't Know (DO NOT READ)	Much worse than expected	Somewhat worse	Just as expected	Somewhat better	Much better than expected
Maintenance of their electricity systems, including the towers, lines and stations	6	1	2	3	4	5
<u>Quality</u> of delivered electricity (i.e. without fluctuations or momentary interruptions)	6	1	2	3	4	5

Q8. Thinking over the last 2 years, has your relationship with HYDRO ONE …?

Improved	☐
Stayed the same	☐
Gotten worse	☐
[DON'T READ] Don't know / No opinion	☐

ASK ONLY OF LDC OR END USER

Q9. [ASK ONLY IF END USER OR LDC] Considering the overall quality of the transmission / distribution service you get from HYDRO ONE, how would you rate the value for money provided by HYDRO ONE? Please use a scale of 1 to 10, where a 1 means poor value and a 10 means excellent value. You may use a 1, a 10 or any number in between. (RECORD ONE RESPONSE ONLY.)

Poor value									*Excellent value*
1	2	3	4	5	6	7	8	9	10
☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Q10. How would you rate HYDRO ONE on the following specific attributes? Please use a 1 to 10 scale, where a 1 means you disagree completely, and a 10 means you agree completely. You may use a 1, a 10 or any number in between to rate each statement.

[RANDOMIZE]	*Disagree Completely*							*Agree Completely*	
	1	2	3	4	5	6	7	8	9	10
A Keeping commitments	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
IF "Keeping commitments" RATED 1-6, ASK: When we asked about keeping commitments you gave a score of __(enter score from q 2.10_1), What commitments were you thinking of? What commitments are you thinking of? [DO NOT CODE, ATTACH VERBATIMS TO INDIVIDUAL NAMES IN EXCEL]										
B Treating you as a valued customer	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
C Respecting the needs of your business/operations	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
GENERATOR ASK Providing accurate billing and settlement services	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
E END USERS ONLY ASK Offering customized conservation advice to allow you to control your costs	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
F Promptly delivering written documents such as memos, agreements or proposals when promised	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
G Demonstrating concern for customers like you	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
H Understanding your business needs for electricity CHECK	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

SAMPLE TYPE TO INSERT (transmission/ distribution/transmission and distribution)										
I Demonstrating flexibility in decisions affecting your business/organization	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
J LDC ONLY ASK Acting as a partner with you in electricity delivery	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
K Negotiating to meet the needs of both parties	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
L Providing relevant information	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
M Making decisions promptly	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
IF "Making decisions promptly" RATED 1-6, ASK: When we asked about making decisions promptly you gave a score of __(enter score from q 2.10_1). What decisions were especially slow? What decisions were especially slow? [DO NOT CODE, ATTACH VERBATIMS TO INDIVIDUAL NAMES IN EXCEL]										
N Being fair	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
IF "Being fair" RATED 1-6, ASK When we asked about HYDRO ONE being fair you gave a score of __(enter score from q 2.10_1). In what way have they not been fair?" In what way have they not been fair? [DO NOT CODE, ATTACH VERBATIMS TO INDIVIDUAL NAMES IN EXCEL]										
O Being non-bureaucratic	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Section 3: Delivery and Transmission

We would like to move the conversation towards the delivery of electricity.

Q11. How would you rate HYDRO ONE on the following dimensions? Please use a 1 to 10 scale, where a 1 means you **disagree completely**, and a 10 means you **agree completely**. You may use a 1, a 10 or any number in between to rate each statement.

[RANDOMIZE]	*Disagree Completely*							*Agree Completely*		
	1	2	3	4	5	6	7	8	9	10
END USER/LDC ASK You have a reliable delivery of electricity GENERATOR ASK You have a reliable transmission connection	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
HYDRO ONE is aware of the condition of the equipment that serves your business/system	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
HYDRO ONE minimizes the number of power outages in your area/affecting your business	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Outages

Please think about times when your electricity delivery was interrupted …[FOR END USER SAY] at your company … [FOR LDC/GENERATOR SAY] at HYDRO ONE delivery points… by outages where HYDRO ONE needed to repair or replace equipment or upgrade service. Others may have occurred on facilities owned by HYDRO ONE due to an accident, weather conditions or equipment failure.

Q12. In the past year, have you experienced any planned or unplanned power outages, [FOR END USER SAY] at your company [FOR LDC/GENERATOR SAY] at HYDRO ONE delivery points?

[ROTATE]	YES		NO		Don't Know [DO NOT READ]
Planned Outages	☐	ASK Q13	☐	SKIP TO Q18	☐
Unplanned Outages	☐	ASK Q14	☐	SKIP TO Q18	☐

Q13. [IF YES TO PLANNED OUTAGES AT Q12] How would you rate HYDRO ONE on the following dimensions during planned outages? Please use a 1 to 10 scale, where a 1 means you **disagree completely**, and a 10 means you **agree completely**. You may use a 1, a 10 or any number in between to rate each statement.

[RANDOMIZE]	*Disagree Completely*							*Agree Completely*		
	1	2	3	4	5	6	7	8	9	10
Providing notice to your organization	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Returning equipment to service when promised	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

13b Please think of what you expect the performance of a utility should be. For the next statements do you think OUTAGE PLANNING performs much better than expected, somewhat better, just as expected, somewhat worse or much worse than expected.

	Much worse than expected	Somewhat worse	Just as expected	Somewhat better	Much better than expected	Don't know (DO NOT READ)
The number of planned outages	1	2	3	4	5	6
The outage planning process	1	2	3	4	5	6

Q14. [IF YES TO UNPLANNED OUTAGES AT Q12] How would you rate HYDRO ONE on the following dimensions during unplanned outages? Please use a 1 to 10 scale, where a 1 means you **disagree completely**, and a 10 means you **agree completely**. You may use a 1, a 10 or any number in between to rate each statement.

[RANDOMIZE]	*Disagree Completely*							*Agree Completely*		
	1	2	3	4	5	6	7	8	9	10
Duration of unplanned outages	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Providing accurate information on the duration of outages	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Being transparent with the information they have about the outage	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Restoring power quickly following an outage	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Providing regular status updates	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Q15. REMOVED
Q16. REMOVED
Q17. REMOVED

Section 4: Account Management / Customer Relations

Now we would like to understand some of your contact experiences with HYDRO ONE.

Q18. Thinking now about your ability to access HYDRO ONE to discuss your questions or problems either over the phone or through a representative, are you very satisfied, somewhat satisfied, neither satisfied nor dissatisfied, somewhat dissatisfied, or very dissatisfied?

Don't Know (DO NOT READ)	Or, Very dissatisfied	Somewhat dissatisfied	Neither satisfied nor dissatisfied	Somewhat Satisfied	Very Satisfied
6	1	2	3	4	5

Q19. In the past year which of the following business contacts did you have with HYDRO ONE? (CHECK ALL THAT APPLY). PAUSE AFTER EACH CONTACT FOR A RESPONSE

[ONLY ASK THIS OF Dx or TxDx]: The HYDRO ONE Business Customer Centre	☐	2
Operations customer support	☐	3
Customer contracts	☐	4
HYDRO ONE web site	☐	5
An Account Executive	☐	6
Other, Specify: ________________________________	☐	

Q21. [IF USED BUSINESS CUSTOMER CENTRE IN Q19 & LDC] How satisfied are you with the your most recent contact with the Business Customer Centre?

Don't Know (DO NOT READ)	Or, Very dissatisfied	Somewhat dissatisfied	Neither satisfied nor dissatisfied	Somewhat Satisfied	Very Satisfied
6	1	2	3	4	5

Q21a. [IF 21 =1 OR 2] Please provide some examples of why you are not satisfied with the Business Customer Centre? DO NOT CODE, VERBATIM ONLY

Q22. REMOVED
Q22a. REMOVED

IF Dx END USER SKIP TO NEXT SECTION 5

(IF USED ACCOUNT EXECUTIVE IN Q19 & If Tx or TxDx or any LDC) Please think about your Account Executive at HYDRO ONE.

Q24. How satisfied are you with your most recent contact experience with your Account Executive?

Don't Know (DO NOT READ)	Or, Very dissatisfied	Somewhat dissatisfied	Neither satisfied nor dissatisfied	Somewhat Satisfied	Very Satisfied
6	1	2	3	4	5

Q25. (IF USED ACCOUNT EXECUTIVE IN Q19 & ASK If Tx or TxDx or any LDC) Using a 1 to 10 scale, where a 1 means you **disagree completely** and a 10 means you **agree completely**, please rate your experience with your Account Executive on each of the following statements. Your Account Executive …(READ LIST)

[RANDOMIZE]	*Disagree Completely*							*Agree Completely*		
	1	2	3	4	5	6	7	8	9	10
Is always available when you need him or her	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Always returns your calls in a timely manner	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Provides all the assistance you need quickly	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Follows up to make sure your question or problem is resolved	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Knows how to direct you to the appropriate person in HYDRO ONE if necessary	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Has the authority to make decisions	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Ask FOR Dx and TxDx CUSTOMERS ONLY: IF GENERATOR DO NOT ASK Q26

Now we would like to ask about HYDRO ONE'S billing process.

Q26. How satisfied are you with the way HYDRO ONE handles its billing?

Don't Know (DO NOT READ)	Or, Very dissatisfied	Somewhat dissatisfied	Neither satisfied nor dissatisfied	Somewhat Satisfied	Very Satisfied
6	1	2	3	4	5

26a. [IF 26=1 OR 2] What improvements would you like to see in the way HYDRO ONE handles its billing? DO NOT CODE, VERBATIM ONLY

Section 5: Communication

Now we would like to change the focus to written and verbal communications.

Q27. Overall how satisfied are you with the way HYDRO ONE communicates with your company?

Don't Know (DO NOT READ)	Or, Very dissatisfied	Somewhat dissatisfied	Neither satisfied nor dissatisfied	Somewhat Satisfied	Very Satisfied
6	1	2	3	4	5

Q27a. REMOVED
Q28. REMOVED

Q29. In the past 12 months, have you made a complaint to HYDRO ONE about its services?

Yes	☐	
No	☐	SKIP TO Q32

29B. What was your complaint about? CODE and analyze against Q31

Q30. REMOVED

Q31. In your opinion was the complaint resolved…(READ OPTIONS)

Completely	☐
Partially	☐
Not at all	☐
Still pending	☐

Q32. REMOVED

Section 6: Value added services

Now we would like to discuss HYDRO ONE and its services.

Q33. Your organization deals with various service providers. Many have capabilities and services that you could leverage to support your business. What characteristics would you seek for them to become a "trusted advisor" to your organization? [DO NOT CODE, VERBATIM ONLY]

Q34. Given how you just defined a trusted advisor, do you consider HYDRO ONE to be a trusted advisor to your organization?

Yes	☐
No	☐

Q35A, B AND C TO BE ASKED IN 2015 ONLY

Q35. HYDRO ONE has a range of capabilities that may be of interest to your organization. Please indicate whether or not you are interested or already use, if provided, any of the following programs or services.

[RANDOMIZE]	Yes	No	Already Use
Power Quality Services	☐	☐	☐
Electronic Invoicing	☐	☐	☐
Electronic Funds Transfer	☐	☐	☐
Capital Investment Programs	☐	☐	☐
Energy Management Consulting Services	☐	☐	☐
Public Website	☐	☐	☐
Customer Web portal	☐	☐	☐
Training Services, (Topic________________)	☐	☐	☐
Other, Specify: ______________________	☐	☐	☐

Q35B. IF TRAINING SERVICES SELECTED YES OR ALREADY USE AT Q35, FOLLOW UP WITH: (IF YES) What type of training services are you interested in? (IF ALREADY USE) What type of training services do you use?

Q35C. IF OTHER SELECTED YES OR ALREADY USE AT Q35, FOLLOW UP WITH:
(IF YES) What other programs or services are you interested in?
(IF ALREADY USE) What other programs or services do you already use?

Q36. REMOVED

NORTHSTAR
Advancing Understanding

Section 7: Final Comments – ASK ALL

Q37. Do you have any further comments that you would like to make to HYDRO ONE about its service and programs? DO NOT CODE, ATTACH VERBATIM TO INDIVIDUAL NAMES IN EXCEL.

Section 8: Access Permissions

That completes our formal questions.

Q38. May we provide your individual responses to HYDRO ONE management?

Yes	☐	
No	☐	ASK Q38a and then SKIP TO Q40

Q38a. REMOVED

Q39. May Hydro One Management provide your individual responses to your Account Executive to review and set up a follow-up meeting with you?

Yes	☐
No	☐

Q40. In order to verify completion of the survey, please fill in the following information.

Name	________________________
Job title	________________________
Company name	________________________
Company location	________________________

Online ending:
Remember, we will only share your responses with HYDRO ONE if you responded "YES" to the previous question.

If you responded "NO", we will not share your individual results with HYDRO ONE.

Thank you very much for your participation.

PROGRAMMER: BE SURE TO APPEND ALL DATA FROM THE CUSTOMER SAMPLE FILE TO THE INTERVIEW RECORD EXCEPT THOSE THAT IDENTIFY THE CUSTOMER SUCH AS NAME, PHONE NUMBER, ACCOUNT NUMBER.

NORTHSTAR
Advancing Understanding

STUDY: Hydro One LDC, End User & Generator - 2015

Time Started:_________Time Completed:_____________ Elapsed Time:_______________
Name:____________________________Telephone: (______)________________________
Company Name:_________________________________Title:_____________________________
Address:____
City:__________ Province:_____________ Postal Code:_______________
Interviewer:______________________________ Date:_____________________________

I am calling because Acrobat has indicated that you haven't had the opportunity to complete the online Satisfaction review yet.

A. You have a few options for how you want to complete this evaluation. I can record how you would like to respond and let Acrobat know your preference. They can call you over the telephone, you have the email with the web site link so you can log onto the questionnaire and complete online, or Acrobat can fax, or e-mail the questionnaire to you. Which would you prefer?

Telephone .1	Do you have a particular date and time that you would like to book the Review with Acrobat, or have Acrobat call you to set a time for the Review? RECORD Date:_________Time: a.m./p.m
Web…………2	Do you need me to re-send the original email to you? CONFIRM: E-mail address… If Acrobat hasn't received your completed Review by April 20, they will call you to complete it by telephone.
Fax…………..3	OBTAIN FAX NUMBER( ) Acrobat will fax the questionnaire to you, along with fax number for you to return your completed opinions. They will send the day to you in the next couple days. If Acrobat hasn't received your completed Review by April 20, they will call you to complete it by telephone.
e-mail………5	OBTAIN e-mail ADDRESS: Acrobat will e-mail the questionnaire to you in the next couple of days. Once you receive it, would you please print it and then fax your opinions back to Acrobat. The fax number will be in the email.
Refuse……..6	IF REFUSES SPRING ASK: A. May we send the questionnaire to you in the Fall or can Acrobat call you in the Fall and have you answer the questions at that time? No………………………………………………..1 ask B Email web link in Fall...................2 Telephone call in Fall……………………..3
	B. IF REFUSES FALL ALSO, ASK: Would you allow Acrobat to call you to ask you to answer one single question on your overall satisfaction with Hydro One? Note: Acrobat must make this call and obtain the score; the AE is not allowed to collect it. Do you have a particular date and time that I can tell Acrobat to call you? RECORD Date: Time: a.m/p.m
DO not call again……….8	IF RESPONDENT ABSOLUTELY REFUSES AND STATES NEVER TO BE CALLED AGAIN, THANKS AND RECORD AND LOG ON PERMANENT REFUSAL LIST.

THANK RESPONDENT AND REPEAT WHAT STEPS THEY HAVE CHOSEN AS A CONFIRMATION.

NORTHSTAR
Advancing Understanding

On-line version Introduction:
HYDRO ONE has commissioned Northstar Research Partners Inc. and their partner, Acrobat Research, both Canadian research firms, to conduct the 2012 customer satisfaction research.

HYDRO ONE believes building a strong relationship with their customers is of prime importance. Collecting feedback from you is key to helping Hydro One understand your needs. Your feedback allows Hydro One to better understand the areas they can improve on, and assists them in streamlining their processes to ensure they are meeting your expectations.

B. I am calling because Acrobat has indicated that you haven't had the opportunity to complete the online satisfaction review yet. Hydro One appreciates the time you spend and the feedback you provide. The review takes about 10 minutes depending on your answers.

Telephone Review Call to On-line non-completes by Acrobat:

Hello, I'm _______________ calling on behalf of HYDRO ONE. I am from Acrobat, a Canadian market research firm. May I please speak with (INSERT NAME)?

(ARRANGE CALLBACK AS NEEDED. IF RESPONDENT IS NOT AVAILABLE, BUT HAS VOICE MAIL OR OTHER MESSAGE SYSTEM, LEAVE A MESSAGE THAT YOU ARE CALLING ABOUT THE PREVIEW THEY WERE ASKED TO PARTICIPATE IN BY HYDRO ONE [THEY SHOULD HAVE RECEIVED A LETTER FROM THEIR ACCOUNT EXECUTIVE], LEAVE YOUR NAME AND MESSAGE THAT YOU WILL CALL BACK. LEAVE NO MORE THAN 2 OR 3)

Call Back	DAY	DATE	TIME
#1			
#2			
#3			

(WHEN CONNECTED TO PERSON, CONTINUE)

Your company should have received a letter and a telephone call from HYDRO ONE about my call. HYDRO ONE'S goal is to achieve a superior level of customer service and they need feedback from customers like you. We're conducting a customer satisfaction review for them and would like to include your opinions. May I continue? (IF NECESSARY SAY; please let me assure you that we are not selling anything. Your answers are completely confidential and will be used for research purposes only.)

Telephone .1	IF RESPONDENT CANNOT CONTINUE NOW, ASK FOR THE DATE AND TIME WHEN YOU CAN CALL BACK AND FINISH THE REVIEW. Date:______________ Time:__________ a.m/p.m

C. Hydro One appreciates the time you spend and the feedback you provide. The evaluation takes about 10 minutes depending on your answers.

D. May I please proceed with asking you the questions and getting your answers over the telephone?
Yes……START AT INTRODUCTION JUST BEFORE SECTION 1.
No……..IF RESPONDENT REFUSES TO ANSWER THE QUESTIONNAIRE, CONTINUE.

E. Would it be alright to contact you in the fall to complete the review?
Yes……CONTINUE TO F
No……..RESPONDENT NOT TO BE CONTACTED, GO TO QG

F. Would you prefer to be contacted by email with the website link or should I telephone you in the fall?
Web link…1
Telephone…2

RECORD W2 CONTACT METHOD. IN W2, RESPONDENT IS CONTACTED ONLY IN THEIR SELECTED WAY IN THE FALL.

Thank you. We will call/email you in September to complete the review at that time.

G. Would you be willing to answer two quick questions before we end the call?
Yes (Continue)
No (Terminate and record)

Q10-2. How would you rate HYDRO ONE on the following specific attributes? Please use a 1 to 10 scale, where a 1 means you **disagree completely**, and a 10 means you **agree completely**. You may use a 1, a 10 or any number in between to rate each statement.

[RANDOMIZE]	*Disagree Completely*							*Agree Completely*		
	1	2	3	4	5	6	7	8	9	10
§§ *ƒ* A Keeping commitments	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
§§ M Making decisions promptly	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

IF RESPONDENT ANSWERED Q10-2 ONLY, SKIP TO SECTION 8 (Q42) AND RECORD ANSWERS.

Respondent is considered a complete and does not get put into the W2 sample

IF RESPONDENT REFUSES TO ANSWER Q10-2 , Respondent is considered a REFUSAL and is not contacted in W2.

<u>Section 1: Customer / Business Context</u>

Q1. REMOVED

<u>Section 2: Overall Impressions of Hydro One</u>

*ƒ*Q2. Overall, how satisfied are you with HYDRO ONE? Would you say you are…? (READ LIST)?

Don't Know (DO NOT READ)	Or, Very dissatisfied	Somewhat dissatisfied	Neither satisfied nor dissatisfied	Somewhat Satisfied	Very Satisfied
6	1	2	3	4	5

Q3. What is the main need or issue that HYDRO ONE could address to support your business needs? [DO NOT READ – DO NOT SHOW PRECODES ON WEB QUESTIONS OR ON PAPER QUESTIONNAIRE]

DO NOT READ	
Reliability/line maintenance	☐
Restoration times	☐
Costs	☐
Accessibility	☐
Outage planning/outage notifications	☐
Communications / proactive phone calls	☐
Responsiveness, follow up	☐
Planned outages	☐
Responsiveness and follow up	☐
Other, Specify: ______________________________	☐
No issues	

Q5 REMOVED

Please think about your overall impressions of HYDRO ONE.

Q7. Compared to other utilities you've dealt with, do you think HYDRO ONE performs much better than expected, somewhat better, just as expected, somewhat worse or much worse than expected on …(INSERT FIRST QUESTION)? REPEAT SCALE IF NECESSARY.

[RANDOMIZE]	Don't Know (DO NOT READ)	Much worse than expected	Somewhat worse	Just as expected	Somewhat better	Much better than expected
Maintenance of their electricity systems, including the towers, lines and stations	6	1	2	3	4	5
Quality of delivered electricity (i.e. without fluctuations or momentary interruptions)	6	1	2	3	4	5

ASK ONLY OF LDC OR END USER

ƒQ9. [ASK ONLY IF END USER OR LDC] Considering the overall quality of the transmission / distribution service you get from HYDRO ONE, how would you rate the value for money provided by HYDRO ONE? Please use a scale of 1 to 10, where a 1 means **poor value** and a 10 means **excellent value**. You may use a 1, a 10 or any number in between. (RECORD ONE RESPONSE ONLY.)

Poor value									*Excellent value*
1	2	3	4	5	6	7	8	9	10
☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Q10. How would you rate HYDRO ONE on the following specific attributes? Please use a 1 to 10 scale, where a 1 means you **disagree completely**, and a 10 means you **agree completely**. You may use a 1, a 10 or any number in between to rate each statement.

[RANDOMIZE]	*Disagree Completely*								*Agree Completely*	
	1	2	3	4	5	6	7	8	9	10
§§ ƒ A Keeping commitments	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

IF "Keeping commitments" RATED 1-10, ASK ALL: When we asked about keeping commitments you gave a score of __(enter score from q 2.10_1), What commitments were you thinking of? What commitments are you thinking of? [DO CODE, ATTACH VERBATIMS TO INDIVIDUAL NAMES IN EXCEL]										
ƒB Treating you as a valued customer	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
ƒC Respecting the needs of your business/operations	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
ƒE END USERS ONLY ASK Offering customized conservation advice to allow you to control your costs	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
ƒG Demonstrating concern for customers like you	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
H Understanding your business needs for electricity CHECK SAMPLE TYPE TO INSERT (transmission/ distribution/transmission and distribution)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
I Demonstrating flexibility in decisions affecting your business/organization	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
ƒJ LDC ONLY ASK Acting as a partner with you in electricity delivery	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
ƒK Negotiating to meet the needs of both parties	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
L Providing relevant information	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
§§ M Making decisions promptly	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
IF "Making decisions promptly" RATED 1-10, ASK ALL: When we asked about making decisions promptly you gave a score of __(enter score from q 2.10_1). What decisions were especially slow? What decisions were especially slow? [DO CODE, ATTACH VERBATIMS TO INDIVIDUAL NAMES IN EXCEL]										
N Being fair	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
~~IF "Being fair" RATED 1-6, ASK When we asked about HYDRO ONE being fair you gave a score of __(enter score from q 2.10_1). In what way have they not been fair?" In what way have they not been fair? [DO NOT CODE, ATTACH VERBATIMS TO INDIVIDUAL NAMES IN~~										

~~EXCEL~~]										
	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Section 3: Delivery and Transmission

We would like to move the conversation towards the delivery of electricity.

Q11. How would you rate HYDRO ONE on the following dimensions? Please use a 1 to 10 scale, where a 1 means you **disagree completely**, and a 10 means you **agree completely**. You may use a 1, a 10 or any number in between to rate each statement.

[RANDOMIZE]	*Disagree Completely*							*Agree Completely*		
	1	2	3	4	5	6	7	8	9	10
ƒEND USER/LDC ASK You have a reliable delivery of electricity GENERATOR ASK You have a reliable transmission connection	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
HYDRO ONE is aware of the condition of the equipment that serves your business/system	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
ƒHYDRO ONE minimizes the number of power outages in your area/affecting your business	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Outages

Please think about times when your electricity delivery was interrupted …[FOR END USER SAY] at your company … [FOR LDC/GENERATOR SAY] at HYDRO ONE delivery points… by outages where HYDRO ONE needed to repair or replace equipment or upgrade service. Others may have occurred on facilities owned by HYDRO ONE due to an accident, weather conditions or equipment failure.

Q12. In the past year, have you experienced any planned or unplanned power outages, [FOR END USER SAY] at your company [FOR LDC/GENERATOR SAY] at HYDRO ONE delivery points?

[ROTATE]	YES		NO		Don't Know [DO NOT READ]
Planned Outages	☐		☐		☐
Unplanned Outages	☐	ASK Q14	☐	SKIP TO Q18	☐

Q14. [IF YES TO UNPLANNED OUTAGES AT Q12] How would you rate HYDRO ONE on the following dimensions during unplanned outages? Please use a 1 to 10 scale, where a 1 means you **disagree completely**, and a 10 means you **agree completely**. You may use a 1, a 10 or any number in between to rate each statement.

[RANDOMIZE]	*Disagree Completely*							*Agree Completely*		
	1	2	3	4	5	6	7	8	9	10
ƒDuration of unplanned outages	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Being transparent with the information they have about the outage	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
IF "Being transparent" RATED 1-6, ASK: When we asked about Hydro One being transparent about information about outages you gave a score of __(enter score from q 2.10_1). What information were you looking for? [DO CODE, ATTACH VERBATIMS TO INDIVIDUAL NAMES IN EXCEL]										
ƒRestoring power quickly following an outage	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Q15. REMOVED
Q16. REMOVED
Q17. REMOVED

Section 4: Account Management / Customer Relations

Now we would like to understand some of your contact experiences with HYDRO ONE.

ƒQ18. Thinking now about your ability to access HYDRO ONE to discuss your questions or problems either over the phone or through a representative, are you very satisfied, somewhat satisfied, neither satisfied nor dissatisfied, somewhat dissatisfied, or very dissatisfied?

Don't Know (DO NOT READ)	Or, Very dissatisfied	Somewhat dissatisfied	Neither satisfied nor dissatisfied	Somewhat Satisfied	Very Satisfied
6	1	2	3	4	5

Q19b. In the past year, have you yourself had contact with or been contacted by a Hydro One Account Executive?

Yes
No
Q22. REMOVED
Q22a. REMOVED

IF Dx END USER SKIP TO NEXT SECTION 5

(IF HAD CONTACT WITH ACCOUNT EXECUTIVE IN Q19b & If Tx or TxDx or any LDC) Please think about your Account Executive at HYDRO ONE.

f Q24. How satisfied are you with your most recent contact experience with your Account Executive?

Don't Know (DO NOT READ)	Or, Very dissatisfied	Somewhat dissatisfied	Neither satisfied nor dissatisfied	Somewhat Satisfied	Very Satisfied
6	1	2	3	4	5

Q25. (IF USED ACCOUNT EXECUTIVE IN Q19 & ASK If Tx or TxDx or any LDC) Using a 1 to 10 scale, where a 1 means you **disagree completely** and a 10 means you **agree completely**, please rate your experience with your Account Executive on each of the following statements. Your Account Executive …(READ LIST)

[RANDOMIZE]	*Disagree Completely*							*Agree Completely*		
	1	2	3	4	5	6	7	8	9	10
Is always available when you need him or her	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Always returns your calls in a timely manner	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
f Provides all the assistance you need quickly	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Follows up to make sure your question or problem is resolved	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
ƒ Knows how to direct you to the appropriate person in HYDRO ONE if necessary	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
ƒ Has the authority to make decisions	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Section 5: Communication

Now we would like to change the focus to written and verbal communications.

Q27. Overall how satisfied are you with the way HYDRO ONE communicates with your company?

Don't Know (DO NOT READ)	Or, Very dissatisfied	Somewhat dissatisfied	Neither satisfied nor dissatisfied	Somewhat Satisfied	Very Satisfied
6	1	2	3	4	5

Q27a. REMOVED
Q28. REMOVED

Q32. REMOVED

Section 6: Value added services

Now we would like to discuss HYDRO ONE and its services.

Q33. Your organization deals with various service providers. Many have capabilities and services that you could leverage to support your business. What characteristics would you seek for them to become a "trusted advisor" to your organization? [DO NOT CODE, VERBATIM ONLY]

Q34. Given how you just defined a trusted advisor, do you consider HYDRO ONE to be a trusted advisor to your organization?

Yes	☐
No	☐

Q35A, B AND C TO BE ASKED IN 2015 ONLY

Q35. HYDRO ONE has a range of capabilities that may be of interest to your organization. Please indicate whether or not you are interested or already use, if provided, any of the following programs or services.

[RANDOMIZE]	Yes	No	Already Use
Power Quality Services	☐	☐	☐
	☐	☐	☐
	☐	☐	☐
	☐	☐	☐
Energy Management Consulting Services	☐	☐	☐
	☐	☐	☐
	☐	☐	☐
Training Services, (Topic________________)	☐	☐	☐
Other, Specify: ______________________	☐	☐	☐

Q35B. IF TRAINING SERVICES SELECTED YES OR ALREADY USE AT Q35, FOLLOW UP WITH: (IF YES) What type of training services are you interested in? (IF ALREADY USE) What type of training services do you use?

Q36. REMOVED

36b In the past 12 months, have you requested technical supporting materials from Hydro One such as standards orprocess requirements?
Yes
No (Skip to 37)

36d Did the requested materials meet your needs .. READ LIST?
Completely
Somewhat
or Not at all
Never received them

Section 7: Final Comments – ASK ALL

Q37. Do you have any further comments that you would like to make to HYDRO ONE? DO NOT CODE, ATTACH VERBATIM TO INDIVIDUAL NAMES IN EXCEL.

Section 8: Access Permissions

That completes our formal questions.

Q38. May we provide your individual responses to HYDRO ONE management?

Yes	☐	
No	☐	ASK Q38a and then SKIP TO Q40

Q38a. REMOVED

Q39. May Hydro One Management provide your individual responses to your Account Executive to review and set up a follow-up meeting with you?

Yes	☐
No	☐

Q40. In order to verify completion of the survey, please fill in the following information.

Name	________________________
Job title	________________________
Company name	________________________
Company location	________________________

Online ending:
Remember, we will only share your responses with HYDRO ONE if you responded "YES" to the previous question.

If you responded "NO", we will not share your individual results with HYDRO ONE.

Thank you very much for your participation.

PROGRAMMER: BE SURE TO APPEND ALL DATA FROM THE CUSTOMER SAMPLE FILE TO THE INTERVIEW RECORD EXCEPT THOSE THAT IDENTIFY THE CUSTOMER SUCH AS NAME, PHONE NUMBER, ACCOUNT NUMBER.

NORTHSTAR research partners

11-187
May 16, 2012
FINAL

STUDY: Ontario Grid Control Centre
Customer Feedback Survey

Time Started:________Time Completed:____________ Elapsed Time:______________

Name:__________________________Telephone: (______)______________________

Company Name:______________________________Title:_________________________________

Address:____

City:_________ Province:___________ Postal Code:_____________

Interviewer:_____________________________ Date:___________________________

On-line version Introduction:
On behalf of Hydro One's Ontario Grid Control Centre, Northstar Research Partners and their partner, Acrobat Research, both Canadian research firms, thank you for taking the time to complete this service review.

The intent of this review is to obtain your feedback on your operating experience between Hydro One's Ontario Grid Control Centre and your company. Feedback such as this is essential in the continuing effort to understand your needs surrounding delivery of a reliable electricity service.

Please be assured that your answers are completely confidential and will be used for research purposes only.

Hydro One appreciates the time you spend and the feedback you provide. The review takes about 15 minutes.

Telephone call interviews to on-line non-responders:

Hello, I'm ________________ calling on behalf of Hydro One's ONTARIO GRID CONTROL CENTRE. I am from Northstar Research Partners, a Canadian market research firm. May I please speak with (INSERT NAME)?

(ARRANGE CALLBACK AS NEEDED. IF RESPONDENT NOT AVAILABLE, BUT HAS VOICE MAIL OR OTHER MESSAGE SYSTEM, LEAVE A MESSAGE THAT YOU ARE CALLING ABOUT THE REVIEW THEY WERE ASKED TO PARTICIPATE IN BY HYDRO ONE [THEY SHOULD HAVE RECEIVED A LETTER FROM EITHER THEIR NETWORK MANAGEMENT OFFICER (NMO) OR THE MANAGER OF CUSTOMER OF OPERATIONS SUPPORT], LEAVE YOUR NAME AND MESSAGE THAT YOU WILL CALL BACK. LEAVE NO MORE THAN 2 OR 3)

(WHEN CONNECTED TO PERSON, CONTINUE.)
Hello, I'm _________________________________ calling on behalf of ONTARIO GRID CONTROL CENTRE. I am from Northstar Research Partners, a Canadian market research firm.

Your company should have received a letter from Hydro One about my call. ONTARIO GRID CONTROL CENTRE's goal is to deliver a superior level of customer service and they need feedback from customers like you. We're conducting a research study for them and would like to include your opinions. May I continue? (IF NECESSARY SAY; please let me assure you that we are not selling anything. Your answers are completely confidential and will be used for research purposes only.)

A. You have a few options for how you want to complete this questionnaire. I can interview you now or later at your preferred time; it would take about 15 minutes. Or I can email you a web site link so you can log onto the questionnaire and complete it online. Which would you prefer?

Telephone ….1	If respondent cannot continue now, ask for date and time when you can call back and finish the review, or give your name as their contact and number they can call you when they have time to complete the review. Date: ____________ Time: __________a.m./p.m.
Web ………..2	Obtain e-mail address to send the connection for the web-site and the password. Inform respondents that they can start and stop working on the interview and pick up were they left off using the same site and password. e-mail address: …………………………………… I will be sending you an e-mail within 24 hours, and if I haven't received a confirmation from you that you got it and were able to open the site, I will call you in 2 days to be sure you received it and can open the site.
Refuses……..6	IF RESPONDENT REFUSES, ASK: Is there someone else in the company we can call? Record name: Phone number: ( )_________. Thanks and record refusal. Record new contact name as survey contact on the file, and initiate new contact
Do not call again………..7	If respondent absolutely refuses and states never to be called again, thanks and record and log on permanent refusal list

Section 1: Overall Impressions of Hydro One/Ontario Grid Control Centre

For this review, please keep your organization's electricity service in mind, not your residential electricity service. As well, this review pertains specifically to your electrical service from an operational perspective – not to other elements of your relationship with Hydro One, such as billing, future investments, etc.

First, please think about your overall impressions of ONTARIO GRID CONTROL CENTRE.

1. How satisfied are you with ONTARIO GRID CONTROL CENTRE overall?

Very dissatisfied	Somewhat dissatisfied	Neither satisfied nor dissatisfied	Somewhat satisfied	Or, very satisfied	Don't know (DO NOT READ)
1	2	3	4	5	6

2. For each of the following, please tell me whether you are very satisfied, somewhat satisfied, neither satisfied nor dissatisfied, somewhat dissatisfied, or very dissatisfied.

RANDOMIZE	Very dissatisfied	Somewhat dissatisfied	Neither satisfied nor dissatisfied	Somewhat satisfied	Or, very satisfied	Don't know (DO NOT READ)
Your relationship with Ontario Grid Control Centre	1	2	3	4	5	6
Ontario Grid Control Centre’s day to day communications with your organization	1	2	3	4	5	6
Knowledge of staff at the Ontario Grid Control Centre	1	2	3	4	5	6

3. Please think about your relationship with ONTARIO GRID CONTROL CENTRE, overall. Thinking over the last 2 years, has your relationship…?

Improved	☐
Stayed the same	☐
Gotten worse	☐
[DON'T READ] Don't know / No opinion	☐

4. For each statement below, please indicate how much you agree or disagree with the statement. To do this, please use a 1 to 10 scale, where a 1 means you disagree completely, and a 10 means you agree completely. You may use a 1, a 10 or any number in between.

[RANDOMIZE]	*Disagree Completely*							*Agree Completely*		
	1	2	3	4	5	6	7	8	9	10
Ontario Grid Control Centre is sensitive to your business needs	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Ontario Grid Control Centre is sensitive to the operational impact of outages on your business	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Responsibilities for outage management between OGCC and your company are clear	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

5. In the past year, have you met with ONTARIO GRID CONTROL CENTRE staff?

Yes	☐
No	☐

6. IF 'YES' AT ABOVE, ASK And was your meeting...?

Much worse than expected	Somewhat worse	Just as expected	Somewhat better	Much better than expected	Don't know (DO NOT READ)
1	2	3	4	5	6

7. Please think about **communications** with ONTARIO GRID CONTROL CENTRE. For each statement below, please indicate how much you agree or disagree with the statement. To do this, please use a 1 to 10 scale, where a 1 means you disagree completely, and a 10 means you agree completely. You may use a 1, a 10 or any number in between to rate each statement.

[RANDOMIZE]	*Disagree Completely*							*Agree Completely*		
	1	2	3	4	5	6	7	8	9	10
Ontario Grid Control Centre's communications are clear and easy to understand	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
It's easy for you to navigate through Ontario Grid Control Centre's automatic phone system	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Ontario Grid Control Centre's regular communications with your organization are timely	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
It's easy to reach the correct contact at Ontario Grid Control Centre	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
ALWAYS ASK LAST When asked, Ontario Grid Control Centre is willing to provide all important information	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

IF Q7_**5 ≤ 6, ASK Q7OPEN**

7Open. Please provide some examples of when ONTARIO GRID CONTROL CENTRE has not been willing to provide the information that you wanted.

8. Please think about the **staff** at ONTARIO GRID CONTROL CENTRE. For each statement below, please indicate how much you agree or disagree with the statement by using the 1 to 10 scale, where a **1** means you disagree completely, and a 10 means you agree completely. You may use a 1, a 10 or any number in between.

[RANDOMIZE]	*Disagree Completely*							*Agree Completely*		
	1	2	3	4	5	6	7	8	9	10
Staff understand your needs	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Staff know who you are	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Staff make decisions promptly	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Staff have a flexible attitude	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Section 2: Outage Planning

1. Thinking about the past year, what percentage of planned electrical outages were…

Initiated by your organization	%
Initiated by the Ontario Grid Control Centre	%
	= 100%

☐ Have not had any planned outages in the past year

IF HAVE NOT HAD ANY PLANNED OUTAGES IN THE PAST YEAR, SKIP TO S2-Q5.

2. In the past year, have you had contact with the OUTAGE PLANNING department at ONTARIO GRID CONTROL Centre – the group that handles planned outages?

Yes	1 - Continue
No	2 - Skip to S2-Q5

3. How satisfied are you with…?

	Very dissatisfied	Somewhat dissatisfied	Neither satisfied nor dissatisfied	Somewhat satisfied	Or, very satisfied	Don't know (DO NOT READ)
The Outage Planning department overall	1	2	3	4	5	6
Ontario Grid Control Centre's procedures on planned outages	1	2	3	4	5	6

4. Please think about **communicating** with the OUTAGE PLANNING department at ONTARIO GRID CONTROL CENTRE. For each statement below, please indicate how much you agree or disagree with the statement by using a 1 to 10 scale, where a **1** means you <u>disagree completely</u>, and a **10** means you <u>agree completely</u>.

[RANDOMIZE]	*Disagree Completely*							*Agree Completely*		
	1	2	3	4	5	6	7	8	9	10
You can easily get access to the Outage Planning department	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
The telephone system used to access Outage Planning correctly routes you to the appropriate outage planning contact	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
You rarely get voice mail when calling Outage Planning	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Ontario Grid Control Centre adequately notifies you about all planned outages	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Any changes in planned outages are communicated to you in a timely way	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Changes to work plans are communicated to you promptly	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Outage Planning responds to your planning queries in a timely manner	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Your company is kept informed of changes throughout the planned outage process	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Ontario Grid Control Centre's procedures on planned outages are clear	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Planned outages that impact multiple companies are conducted in a fair manner	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Ontario Grid Control Centre provides you with sufficient detail on how planned outages will be handled	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Ontario Grid Control Centre is willing to accommodate your business' unanticipated operational changes that impact planned outages	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Outage Planning responds to your voice mail queries in a timely manner	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

5. Do you receive auto notification emails on planned outages?

Yes	1 – Continue
No	2 – Skip to Q5b

5a. How satisfied are you with the information provided in the emails?

Very dissatisfied	Somewhat dissatisfied	Neither satisfied nor dissatisfied	Somewhat satisfied	Or, very satisfied	Don't know (DO NOT READ)
1	2	3	4	5	6

5b. **[If 5=2 ASK]:** Would you like to receive automatic notification emails on planned outages?

Yes	1
No	2

IF Q2-2=2 SKIP TO SECTION 3

6. Now please think about the **performance** of the OUTAGE PLANNING department at ONTARIO GRID CONTROL CENTRE. For each statement below, please indicate how much you agree or disagree with the statement by using a 1 to 10 scale, where a 1 means you disagree completely, and a 10 means you agree completely.

[RANDOMIZE]	*Disagree Completely*							*Agree Completely*		
	1	2	3	4	5	6	7	8	9	10
Outage Planning staff are knowledgeable about your business operations	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Outage Planning staff are knowledgeable about your company's processes and unique needs	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

7. For each of the following OUTAGE PLANNING SERVICES, please tell me whether you are very satisfied, somewhat satisfied, neither satisfied nor dissatisfied, somewhat dissatisfied, or very dissatisfied.

	Very dissatisfied	Somewhat dissatisfied	Neither satisfied nor dissatisfied	Somewhat satisfied	Or, very satisfied	Don't know (DO NOT READ)
Long term outage plans	1	2	3	4	5	6
Your individual planned outages	1	2	3	4	5	6

8. Please think of what you expect the performance of a utility should be. For the next statements do you think OUTAGE PLANNING performs much better than expected, somewhat better, just as expected, somewhat worse or much worse than expected.

	Much worse than expected	Somewhat worse	Just as expected	Somewhat better	Much better than expected	Don't know (DO NOT READ)
The number of planned outages	1	2	3	4	5	6
The outage planning process	1	2	3	4	5	6

If Q8_**2 ≤ 2, ASK Q8OPEN.**
Q8 OPEN. Please give some examples of what problems are occurring with the OUTAGE PLANNING process.

9. When thinking about outage planning, which would be most important…?

Improving the planning process	1
Improving the communication with your business	2
Neither, it's fine as is	3

Section 3: Control Room

1. In the past year, have you had contact with the CONTROL ROOM at ONTARIO GRID CONTROL CENTRE? It provides the 7 days 24 hours monitoring and control of the transmission system. They respond to and communicate with customers in real-time, including managing of planned and unplanned forced outages. By an unplanned outage, we mean an outage that occurred on the facilities owned by Hydro One Networks due to unexpected equipment failure.

Yes	1 – continue
No	2 – skip to Q4

2. Overall, how satisfied are you with ONTARIO GRID CONTROL CENTRE's Control Room?

Very dissatisfied	Somewhat dissatisfied	Neither satisfied nor dissatisfied	Somewhat satisfied	Or, very satisfied	Don't know (DO NOT READ)
1	2	3	4	5	6

3. Please think about **communicating** with the CONTROL ROOM at ONTARIO GRID CONTROL CENTRE. For each statement below, please indicate how much you agree or disagree with the statement by using a 1 to 10 scale, where a 1 means you disagree completely, and a 10 means you agree completely.

[RANDOMIZE]	*Disagree Completely*							*Agree Completely*		
	1	2	3	4	5	6	7	8	9	10
You can easily get access to the Control Room	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
It is easy to reach the appropriate Control Room personnel over the telephone	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
The telephone system used to access the Control Room correctly routes you to the appropriate Control Room contact	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
You rarely get voice mail when calling the Control Room	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Control Room staff provide the right information	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Control Room staff provide timely information	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
You receive prompt updates on electrical system failures/ problems affecting your company	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Planned outages are carried out on schedule	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Control Room staff respond to your voice mail queries in a timely manner	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

4. ONTARIO GRID CONTROL CENTRE provides 3 different forms of notification. Which, if any, of the following are you receiving/accessing?

	Yes	No
Customer Notification Bulletins (accessed through the customer web site, these are provided to customers when an unplanned power outage or event affects supply)	☐	☐
Significant Event Notification Emails	☐	☐
Real time data via the Inter-Control Center Communication Protocol (ICCP) link	☐	☐

5. [INSERT ONLY THOSE SELECTED AT Q4] How satisfied are you with the information you receive through the…

	Very dissatisfied	Somewhat dissatisfied	Neither satisfied nor dissatisfied	Somewhat satisfied	Or, very satisfied	Don't know (DO NOT READ)
Customer Notification Bulletins	1	2	3	4	5	6
Significant Event Notification Emails	1	2	3	4	5	6
Real time data via the Inter-Control Center Communication Protocol (ICCP) link	1	2	3	4	5	6

5b. What suggestions do you have for improving this information: [INSERT ALL 'YES' FROM Q4]

☐ None

5c. [IF "NO" AT Q4_2, THEN ASK] Would you like to receive Significant Event Notification Emails?

Yes	1
No	2

6. Do you have the electronic hold-off in place?

Yes	1 – continue
No	2 – skip to Q8

7. How satisfied are you with the usefulness of this service to your operations?

Very dissatisfied	Somewhat dissatisfied	Neither satisfied nor dissatisfied	Somewhat satisfied	Or, very satisfied	Don't know (DO NOT READ)
1	2	3	4	5	6

8. Now please think about the **performance** of the CONTROL ROOM at ONTARIO GRID CONTROL CENTRE. For each statement below, please indicate how much you agree or disagree with the statement by using a 1 to 10 scale, where a 1 means you <u>disagree completely</u>, and a 10 means you <u>agree completely</u>.

[RANDOMIZE]	*Disagree Completely*						*Agree Completely*		
	1	2	3	4	5	6	7	8	9	10
Control Room staff are responsive in meeting your company's needs	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Control Room staff are knowledgeable in the areas that are important to your company	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Control Room staff are knowledgeable about your company's processes and unique needs	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Control Room staff are knowledgeable about your business operations	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Planned outages are carried out as scheduled	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

9. For each of the following CONTROL ROOM services, please tell me whether you are very satisfied, somewhat satisfied, neither satisfied nor dissatisfied, somewhat dissatisfied, or very dissatisfied.

	Very dissatisfied	Somewhat dissatisfied	Neither satisfied nor dissatisfied	Somewhat satisfied	Or, very satisfied	Don't know (DO NOT READ)
Handling unplanned outages affecting your business	1	2	3	4	5	6
Handling planned outages affecting your business	1	2	3	4	5	6
Power restoration time	1	2	3	4	5	6
Dispatching crews	1	2	3	4	5	6

Section 4: Customer Operations Support

1. Have you had contact with the CUSTOMER OPERATIONS SUPPORT department at ONTARIO GRID CONTROL CENTRE in the past year? This is the department at ONTARIO GRID CONTROL CENTRE that provides customers follow-up on operational incidents and updates the operating schedules of the connection agreement (e.g. Schedule A or D).

Yes	1 – continue
No	2 – skip to Q4a

2. How satisfied are you with the CUSTOMER OPERATIONS SUPPORT department overall?

Very dissatisfied	Somewhat dissatisfied	Neither satisfied nor dissatisfied	Somewhat satisfied	Or, very satisfied	Don't know (DO NOT READ)
1	2	3	4	5	6

3. Thinking now about your Schedule A (or D in some cases) of the Connection Agreement, please tell me whether you are very satisfied, somewhat satisfied, neither satisfied nor dissatisfied, somewhat dissatisfied, or very dissatisfied with your Schedule A/D...

RANDOMIZE	Very dissatisfied	Somewhat dissatisfied	Neither satisfied nor dissatisfied	Somewhat satisfied	Or, very satisfied	Don't know (DO NOT READ)
Accuracy	1	2	3	4	5	6
Comprehensiveness	1	2	3	4	5	6
Clarity	1	2	3	4	5	6

4. Please think about **communicating** with the CUSTOMER OPERATIONS SUPPORT department at ONTARIO GRID CONTROL CENTRE. For each statement below, please indicate how much you agree or disagree with the statement by using a 1 to 10 scale, where a *1* means you disagree completely, and a 10 means you agree completely.

[RANDOMIZE]	*Disagree Completely*							*Agree Completely*		
	1	2	3	4	5	6	7	8	9	10
You can easily access Operations Support	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Follow-up staff are responsive	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Follow-ups to your queries are handled in a timely manner	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Follow ups to your queries are effective	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
You know who to call when you have a Follow-up question	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

ONTARIO GRID CONTROL CENTRE'S weekly report is a brief summary of the week's significant transmission and distribution events.

4a. Are you currently receiving ONTARIO GRID CONTROL CENTRE'S (OGCC's) Weekly Report?

Yes	1 – continue
No	2 – skip to Q4F

4b. Do you read OGCC's Weekly Report?

Yes	1
No	2

4c. Do you currently distribute OGCC's Weekly Report internally, to other staff within your organization?

Yes	1
No	2

4d. How satisfied are you with the information provided to you in OGCC's Weekly Report?

Very dissatisfied	Somewhat dissatisfied	Neither satisfied nor dissatisfied	Somewhat satisfied	Or, very satisfied	Don't know (DO NOT READ)
1	2	3	4	5	6

4e. What suggestions do you have to improve the OGCC's Weekly Report?

None ☐

4f. IF DO NOT CURRENTLY RECEIVE (Q4A=NO): Would you like to receive OGCC's Weekly Report via Email?

Yes	1
No	2

5. Are you familiar with Hydro One's Network Operating Customer Website? It is a site that requires a secure login, and provides operating-specific communications, such as: bulletins, briefings, connection agreements, etc.

Yes	1
No	2

5b. [IF AWARE AT Q5] Have you ever visited this website?

Yes	1
No	2

5c. [IF AWARE AT Q5] How useful is this website to your business?

Not at all useful	Not very useful	Neither	Somewhat useful	Very useful	Don't know (DO NOT READ)
1	2	3	4	5	6

Section 5: Network Management Officer

1. In the past year, have you had contact with your Operating Support NETWORK MANAGEMENT OFFICER at ONTARIO GRID CONTROL CENTRE? This is the person who is identified in your operating Schedule A (or D) as your point of contact for the post incidents inquiry.

Yes	1 – continue
No	2 – skip to Customer Briefings Section 6

2. How satisfied are you with your most recent contact experience with your Network Management Officer?

Very dissatisfied	Somewhat dissatisfied	Neither satisfied nor dissatisfied	Somewhat satisfied	Or, very satisfied	Don't know (DO NOT READ)
1	2	3	4	5	6

3. Using a 1 to 10 scale, where a 1 means you **disagree completely** and a 10 means you **agree completely**, please rate your experience with your Network Management Officer on each of the following statements. Your Network Management Officer …

[RANDOMIZE]	*Disagree Completely*							*Agree Completely*		
	1	2	3	4	5	6	7	8	9	10
Is always available	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Always returns your calls in a timely manner	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Gets you the assistance you need quickly	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Provides all the information you need when you call	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Follows up to make sure your question or problem is resolved	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Is responsive	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

4. In the past year, have you had a meeting with your NETWORK MANAGEMENT OFFICER?

Yes	1
No	2

4b. IF 'YES' ABOVE: In your opinion, what would make for a productive meeting with your Network Management Officer? [DO NOT CODE, ATTACH VERBATIMS TO INDIVIDUAL NAMES IN EXCEL]

Section 6: Customer Briefings

1. A Customer Briefing is a formal written account of an electrical incident showing timelines, analysis and follow up recommendations. Have you received any Customer Briefings from ONTARIO GRID CONTROL CENTRE in the past year?

Yes	1 – continue
No	2 – skip to Section 7

2. How satisfied are you with **Customer Briefings** of incidents?

Very dissatisfied	Somewhat dissatisfied	Neither satisfied nor dissatisfied	Somewhat satisfied	Or, very satisfied	Don't know (DO NOT READ)
1	2	3	4	5	6

3. Please think about **Customer Briefings** from ONTARIO GRID CONTROL CENTRE. For each statement below, please indicate how much you agree or disagree with the statement using a 1 to 10 scale, where a 1 means you disagree completely, and a 10 means you agree completely.

[RANDOMIZE]	*Disagree Completely*							*Agree Completely*		
	1	2	3	4	5	6	7	8	9	10
Customer Briefings on significant events are detailed and informative	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
When follow-up items are identified in Customer Briefings you are notified of their resolution or progress	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Customer Briefings on significant events are timely	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

4. What changes in content or format would you like to see made to Customer Briefings? [DO NOT CODE, ATTACH VERBATIMS TO INDIVIDUAL NAMES IN EXCEL]

None…………☐

Section 7: Final Comments

1. In what areas would greater collaboration with ONTARIO GRID CONTROL CENTRE be beneficial to your business?

2. Could you please identify from the following list the top challenge in regards to your electricity supply and /or your generation capability? [READ APPROPRIATE LIST] [PROVIDE VERBATIM RESPONSE FOR "OTHER"] Allow multiple response but don't ask for it

The energy system infrastructure in your facility	❑
Your company's redundancy/emergency planning	❑
The reliability	❑
Conducting general maintenance on your electrical equipment	❑
Other, Specify: ________________________________	❑

3. Thinking about the next 5 years, is your organization planning on…

	Yes	No
Improving energy system infrastructure in your facility	❑	❑
Improving redundancy/emergency planning	❑	❑
Improving reliability	❑	❑
Conducting general maintenance on your electrical equipment	❑	❑
Installing new power sensitive equipment	❑	❑
Upgrading electricity control systems	❑	❑

4. Do you have any further comments that you would like to make about ONTARIO GRID CONTROL CENTRE? [DO NOT CODE, ATTACH VERBATIMS TO INDIVIDUAL NAMES IN EXCEL]

5. ONTARIO GRID CONTROL CENTRE Management has asked if you will allow them to see the results of your specific interview in addition to the aggregate research results to help them better work toward meeting your company's specific needs.

   May we provide your responses to ONTARIO GRID CONTROL CENTRE management?

Yes	1
No	2

IF 2-5B IS YES, ASK…

6. Earlier, you mentioned that you would be interested in receiving automatic notification emails on planned outages. Can we please provide your information to OGCC staff so that they can enroll you in this program?

Yes	1
No	2

IF 3-5C IS YES, ASK…

7. Earlier, you mentioned that you would be interested in receiving Significant Event Notification emails. Can we please provide your information to OGCC staff so that they can enroll you in this program?

Yes	1
No	2

IF 4-4F IS YES, ASK…

8. Earlier, you mentioned that you would be interested in receiving OGCC's Weekly Report via email. Can we please provide your information to OGCC staff so that they can enroll you in this program?

Yes	1
No	2

NORTHSTAR research partners

11-187
April 17, 2014
FINAL

STUDY: Ontario Grid Control Centre
Customer Feedback Survey

Time Started:________ Time Completed:____________		Elapsed Time:______________
Name:__________________________ Telephone: (______)______________________		
Company Name:______________________________ Title:_________________________________		
Address:____		
City:_________	Province:___________	Postal Code:_____________
Interviewer:_____________________________		Date:___________________________

On-line version Introduction:
On behalf of Hydro One's Ontario Grid Control Centre, Northstar Research Partners and their partner, Acrobat Research, both Canadian research firms, thank you for taking the time to complete this service review.

The intent of this review is to obtain your feedback on your operating experience between Hydro One's Ontario Grid Control Centre and your company. Feedback such as this is essential in the continuing effort to understand your needs surrounding delivery of a reliable electricity service.

Please be assured that your answers are completely confidential and will be used for research purposes only.

Hydro One appreciates the time you spend and the feedback you provide. The review takes about 15 minutes.

Telephone call interviews to on-line non-responders:

Hello, I'm ________________ calling on behalf of Hydro One's ONTARIO GRID CONTROL CENTRE. I am from Northstar Research Partners, a Canadian market research firm. May I please speak with (INSERT NAME)?

(ARRANGE CALLBACK AS NEEDED. IF RESPONDENT NOT AVAILABLE, BUT HAS VOICE MAIL OR OTHER MESSAGE SYSTEM, LEAVE A MESSAGE THAT YOU ARE CALLING ABOUT THE REVIEW THEY WERE ASKED TO PARTICIPATE IN BY HYDRO ONE [THEY SHOULD HAVE RECEIVED A LETTER FROM EITHER THEIR NETWORK MANAGEMENT OFFICER (NMO) OR THE MANAGER OF CUSTOMER OF OPERATIONS SUPPORT], LEAVE YOUR NAME AND MESSAGE THAT YOU WILL CALL BACK. LEAVE NO MORE THAN 2 OR 3)

(WHEN CONNECTED TO PERSON, CONTINUE.)
Hello, I'm ______________________________ calling on behalf of ONTARIO GRID CONTROL CENTRE. I am from Northstar Research Partners, a Canadian market research firm.

Your company should have received a letter from Hydro One about my call. ONTARIO GRID CONTROL CENTRE's goal is to deliver a superior level of customer service and they need feedback from customers like you. We're conducting a research study for them and would like to include your opinions. May I continue? (IF NECESSARY SAY; please let me assure you that we are not selling anything. Your answers are completely confidential and will be used for research purposes only.)

A. You have a few options for how you want to complete this questionnaire. I can interview you now or later at your preferred time; it would take about 15 minutes. Or I can email you a web site link so you can log onto the questionnaire and complete it online. Which would you prefer?

Telephone ….1	If respondent cannot continue now, ask for date and time when you can call back and finish the review, or give your name as their contact and number they can call you when they have time to complete the review. Date: ____________ Time: __________a.m./p.m.
Web ………..2	Obtain e-mail address to send the connection for the web-site and the password. Inform respondents that they can start and stop working on the interview and pick up were they left off using the same site and password. e-mail address: …………………………………… I will be sending you an e-mail within 24 hours, and if I haven't received a confirmation from you that you got it and were able to open the site, I will call you in 2 days to be sure you received it and can open the site.
Refuses……..6	IF RESPONDENT REFUSES, ASK: Is there someone else in the company we can call? Record name: Phone number: ( )_________. Thanks and record refusal. Record new contact name as survey contact on the file, and initiate new contact
Do not call again………..7	If respondent absolutely refuses and states never to be called again, thanks and record and log on permanent refusal list

Section 1: Overall Impressions of Hydro One/Ontario Grid Control Centre

For this review, please keep your organization's electricity service in mind, not your residential electricity service. As well, this review pertains specifically to your electrical service from an operational perspective – not to other elements of your relationship with Hydro One, such as billing, future investments, etc.

First, please think about your overall impressions of ONTARIO GRID CONTROL CENTRE.

1. ƒ How satisfied are you with ONTARIO GRID CONTROL CENTRE overall?

Very dissatisfied	Somewhat dissatisfied	Neither satisfied nor dissatisfied	Somewhat satisfied	Or, very satisfied	Don't know (DO NOT READ)
1	2	3	4	5	6

2. For each of the following, please tell me whether you are very satisfied, somewhat satisfied, neither satisfied nor dissatisfied, somewhat dissatisfied, or very dissatisfied.

RANDOMIZE	Very dissatisfied	Somewhat dissatisfied	Neither satisfied nor dissatisfied	Somewhat satisfied	Or, very satisfied	Don't know (DO NOT READ)
ƒ Your relationship with Ontario Grid Control Centre	1	2	3	4	5	6
ƒ Ontario Grid Control Centre's day to day communications with your organization	1	2	3	4	5	6
ƒ Knowledge of staff at the Ontario Grid Control Centre	1	2	3	4	5	6

3. Please think about your relationship with ONTARIO GRID CONTROL CENTRE, overall. Thinking over the last 2 years, has your relationship…?

Improved	☐
Stayed the same	☐
Gotten worse	☐
[DON'T READ] Don't know / No opinion	☐

4. For each statement below, please indicate how much you agree or disagree with the statement. To do this, please use a 1 to 10 scale, where a 1 means you <u>disagree completely</u>, and a 10 means you <u>agree completely</u>. You may use a 1, a 10 or any number in between.

[RANDOMIZE]	*Disagree Completely*							*Agree Completely*		
	1	2	3	4	5	6	7	8	9	10
f (LQ) Ontario Grid Control Centre is sensitive to your business needs	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
f (LQ) Ontario Grid Control Centre is sensitive to the operational impact of outages on your business	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
(LQ) Responsibilities for outage management between OGCC and your company are clear	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

5. In the past year, have you met with ONTARIO GRID CONTROL CENTRE staff?

Yes	☐
No	☐

6. IF 'YES' AT ABOVE, ASK And was your meeting...?

Much worse than expected	Somewhat worse	Just as expected	Somewhat better	Much better than expected	Don't know (DO NOT READ)
1	2	3	4	5	6

7. Please think about **communications** with ONTARIO GRID CONTROL CENTRE. For each statement below, please indicate how much you agree or disagree with the statement. To do this, please use a 1 to 10 scale, where a 1 means you disagree completely, and a 10 means you agree completely. You may use a 1, a 10 or any number in between to rate each statement.

[RANDOMIZE]	*Disagree Completely*							*Agree Completely*		
	1	2	3	4	5	6	7	8	9	10
Ontario Grid Control Centre's communications are clear and easy to understand	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
It's easy for you to navigate through Ontario Grid Control Centre's automatic phone system	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Ontario Grid Control Centre's regular communications with your organization are timely	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
LQ It's easy to reach the correct contact at Ontario Grid Control Centre	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
ƒ (LQ) ALWAYS ASK LAST When asked, Ontario Grid Control Centre is willing to provide all important information	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

IF Q7_**5 ≤ 6, ASK Q7OPEN**

7Open. Please provide some examples of when ONTARIO GRID CONTROL CENTRE has not been willing to provide the information that you wanted.

8. Please think about the **staff** at ONTARIO GRID CONTROL CENTRE. For each statement below, please indicate how much you agree or disagree with the statement by using the 1 to 10 scale, where a 1 means you disagree completely, and a 10 means you agree completely. You may use a 1, a 10 or any number in between.

[RANDOMIZE]	*Disagree Completely*							*Agree Completely*		
	1	2	3	4	5	6	7	8	9	10
Staff understand your needs	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Staff know who you are	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
ƒ (LQ) Staff make decisions promptly	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
ƒ Staff have a flexible attitude	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Section 2: Outage Planning

1. Thinking about the past year, what percentage of planned electrical outages were…

Initiated by your organization	%
Initiated by the Ontario Grid Control Centre	%
	= 100%

☐ Have not had any planned outages in the past year

IF HAVE NOT HAD ANY PLANNED OUTAGES IN THE PAST YEAR, SKIP TO S2-Q5.

2. In the past year, have you had contact with the OUTAGE PLANNING department at ONTARIO GRID CONTROL Centre – the group that handles planned outages?

Yes	1 - Continue
No	2 - Skip to S2-Q5

3. How satisfied are you with…?

	Very dissatisfied	Somewhat dissatisfied	Neither satisfied nor dissatisfied	Somewhat satisfied	Or, very satisfied	Don't know (DO NOT READ)
ƒ The Outage Planning department overall	1	2	3	4	5	6
Ontario Grid Control Centre's procedures on planned outages	1	2	3	4	5	6

4. Please think about **communicating** with the OUTAGE PLANNING department at ONTARIO GRID CONTROL CENTRE. For each statement below, please indicate how much you agree or disagree with the statement by using a 1 to 10 scale, where a 1 means you <u>disagree completely</u>, and a 10 means you <u>agree completely</u>.

[RANDOMIZE]	*Disagree Completely*							*Agree Completely*		
	1	2	3	4	5	6	7	8	9	10
You can easily get access to the Outage Planning department	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
The telephone system used to access Outage Planning correctly routes you to the appropriate outage planning contact	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
You rarely get voice mail when calling Outage Planning	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
ƒ Ontario Grid Control Centre adequately notifies you about all planned outages	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
ƒ (LQ) Any changes in planned outages are communicated to you in a timely way	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
ƒ (LQ) Changes to work plans are communicated to you promptly	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Outage Planning responds to your planning queries in a timely manner	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
ƒ (LQ) Your company is kept informed of changes throughout the planned outage process	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Ontario Grid Control Centre's procedures on planned outages are clear	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Planned outages that impact multiple companies are conducted in a fair manner	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Ontario Grid Control Centre provides you with sufficient detail on how planned outages will be handled	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Ontario Grid Control Centre is willing to accommodate your business' unanticipated operational changes that impact planned outages	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
ƒ Outage Planning responds to your voice mail queries in a timely manner	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

5. Do you receive auto notification emails on planned outages?

Yes	1 – Continue
No	2 – Skip to Q5b

5a. How satisfied are you with the information provided in the emails?

Very dissatisfied	Somewhat dissatisfied	Neither satisfied nor dissatisfied	Somewhat satisfied	Or, very satisfied	Don't know (DO NOT READ)
1	2	3	4	5	6

5b. **[If 5=2 ASK]:** Would you like to receive automatic notification emails on planned outages?

Yes	1
No	2

IF Q2-2=2 SKIP TO SECTION 3

6. Now please think about the **performance** of the OUTAGE PLANNING department at ONTARIO GRID CONTROL CENTRE. For each statement below, please indicate how much you agree or disagree with the statement by using a 1 to 10 scale, where a 1 means you disagree completely, and a 10 means you agree completely.

[RANDOMIZE]	*Disagree Completely*							*Agree Completely*		
	1	2	3	4	5	6	7	8	9	10
Outage Planning staff are knowledgeable about your business operations	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Outage Planning staff are knowledgeable about your company's processes and unique needs	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

7. For each of the following OUTAGE PLANNING SERVICES, please tell me whether you are very satisfied, somewhat satisfied, neither satisfied nor dissatisfied, somewhat dissatisfied, or very dissatisfied.

	Very dissatisfied	Somewhat dissatisfied	Neither satisfied nor dissatisfied	Somewhat satisfied	Or, very satisfied	Don't know (DO NOT READ)
Long term outage plans	1	2	3	4	5	6
ƒ Your individual planned outages	1	2	3	4	5	6

8. Please think of what you expect the performance of a utility should be. For the next statements do you think OUTAGE PLANNING performs much better than expected, somewhat better, just as expected, somewhat worse or much worse than expected.

	Much worse than expected	Somewhat worse	Just as expected	Somewhat better	Much better than expected	Don't know (DO NOT READ)
The number of planned outages	1	2	3	4	5	6
The outage planning process	1	2	3	4	5	6

If Q8_**2 ≤ 2, ASK Q8OPEN.**
Q8 OPEN. Please give some examples of what problems are occurring with the OUTAGE PLANNING process.

9. When thinking about outage planning, which would be most important…?

Improving the planning process	1
Improving the communication with your business	2
Neither, it's fine as is	3

Section 3: Control Room

1. In the past year, have you had contact with the CONTROL ROOM at ONTARIO GRID CONTROL CENTRE? It provides the 7 days 24 hours monitoring and control of the transmission system. They respond to and communicate with customers in real-time, including managing of planned and unplanned forced outages. By an unplanned outage, we mean an outage that occurred on the facilities owned by Hydro One Networks due to unexpected equipment failure.

Yes	1 – continue
No	2 – skip to Q4

2. Overall, how satisfied are you with ONTARIO GRID CONTROL CENTRE's Control Room?

Very dissatisfied	Somewhat dissatisfied	Neither satisfied nor dissatisfied	Somewhat satisfied	Or, very satisfied	Don't know (DO NOT READ)
1	2	3	4	5	6

3. Please think about **communicating** with the CONTROL ROOM at ONTARIO GRID CONTROL CENTRE. For each statement below, please indicate how much you agree or disagree with the statement by using a 1 to 10 scale, where a 1 means you disagree completely, and a 10 means you agree completely.

[RANDOMIZE]	*Disagree Completely*							*Agree Completely*		
	1	2	3	4	5	6	7	8	9	10
You can easily get access to the Control Room	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
It is easy to reach the appropriate Control Room personnel over the telephone	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
The telephone system used to access the Control Room correctly routes you to the appropriate Control Room contact	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
You rarely get voice mail when calling the Control Room	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Control Room staff provide the right information	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Control Room staff provide timely information	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
You receive prompt updates on electrical system failures/ problems affecting your company	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Planned outages are carried out on schedule	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Control Room staff respond to your voice mail queries in a timely manner	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

4. ONTARIO GRID CONTROL CENTRE provides 3 different forms of notification. Which, if any, of the following are you receiving/accessing?

	Yes	No
Customer Notification Bulletins (accessed through the customer web site, these are provided to customers when an unplanned power outage or event affects supply)	☐	☐
Significant Event Notification Emails	☐	☐
Real time data via the Inter-Control Center Communication Protocol (ICCP) link	☐	☐

5. [INSERT ONLY THOSE SELECTED AT Q4] How satisfied are you with the information you receive through the…

	Very dissatisfied	Somewhat dissatisfied	Neither satisfied nor dissatisfied	Somewhat satisfied	Or, very satisfied	Don't know (DO NOT READ)
ƒ (LQ) Customer Notification Bulletins	1	2	3	4	5	6
Significant Event Notification Emails	1	2	3	4	5	6
Real time data via the Inter-Control Center Communication Protocol (ICCP) link	1	2	3	4	5	6

5b. What suggestions do you have for improving this information: [INSERT ALL 'YES' FROM Q4]

☐ None

5c. [IF "NO" AT Q4_2, THEN ASK] Would you like to receive Significant Event Notification Emails?

Yes	1
No	2

6. Do you have the electronic hold-off in place?

Yes	1 – continue
No	2 – skip to Q8

7. How satisfied are you with the usefulness of this service to your operations?

Very dissatisfied	Somewhat dissatisfied	Neither satisfied nor dissatisfied	Somewhat satisfied	Or, very satisfied	Don't know (DO NOT READ)
1	2	3	4	5	6

8. Now please think about the **performance** of the CONTROL ROOM at ONTARIO GRID CONTROL CENTRE. For each statement below, please indicate how much you agree or disagree with the statement by using a 1 to 10 scale, where a 1 means you disagree completely, and a 10 means you agree completely.

[RANDOMIZE]	*Disagree Completely*							*Agree Completely*		
	1	2	3	4	5	6	7	8	9	10
ƒ (LQ) Control Room staff are responsive in meeting your company's needs	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Control Room staff are knowledgeable in the areas that are important to your company	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
(LQ) Control Room staff are knowledgeable about your company's processes and unique needs	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Control Room staff are knowledgeable about your business operations	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Planned outages are carried out as scheduled	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

9. For each of the following CONTROL ROOM services, please tell me whether you are very satisfied, somewhat satisfied, neither satisfied nor dissatisfied, somewhat dissatisfied, or very dissatisfied.

	Very dissatisfied	Somewhat dissatisfied	Neither satisfied nor dissatisfied	Somewhat satisfied	Or, very satisfied	Don't know (DO NOT READ)
(LQ) Handling unplanned outages affecting your business	1	2	3	4	5	6
Handling planned outages affecting your business	1	2	3	4	5	6
(LQ) Power restoration time	1	2	3	4	5	6
(LQ) Dispatching crews	1	2	3	4	5	6

Section 4: Customer Operations Support

1. Have you had contact with the CUSTOMER OPERATIONS SUPPORT department at ONTARIO GRID CONTROL CENTRE in the past year? This is the department at ONTARIO GRID CONTROL CENTRE that provides customers follow-up on operational incidents and updates the operating schedules of the connection agreement (e.g. Schedule A or D).

Yes	1 – continue
No	2 – skip to Q4a

2. ƒ How satisfied are you with the CUSTOMER OPERATIONS SUPPORT department overall?

Very dissatisfied	Somewhat dissatisfied	Neither satisfied nor dissatisfied	Somewhat satisfied	Or, very satisfied	Don't know (DO NOT READ)
1	2	3	4	5	6

3. Thinking now about your Schedule A (or D in some cases) of the Connection Agreement, please tell me whether you are very satisfied, somewhat satisfied, neither satisfied nor dissatisfied, somewhat dissatisfied, or very dissatisfied with your Schedule A/D...

RANDOMIZE	Very dissatisfied	Somewhat dissatisfied	Neither satisfied nor dissatisfied	Somewhat satisfied	Or, very satisfied	Don't know (DO NOT READ)
Accuracy	1	2	3	4	5	6
Comprehensiveness	1	2	3	4	5	6
Clarity	1	2	3	4	5	6

4. Please think about **communicating** with the CUSTOMER OPERATIONS SUPPORT department at ONTARIO GRID CONTROL CENTRE. For each statement below, please indicate how much you agree or disagree with the statement by using a 1 to 10 scale, where a *1* means you disagree completely, and a 10 means you agree completely.

[RANDOMIZE]	*Disagree Completely*							*Agree Completely*		
	1	2	3	4	5	6	7	8	9	10
ƒ You can easily access Operations Support	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
ƒ Follow-up staff are responsive	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
ƒ Follow-ups to your queries are handled in a timely manner	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
ƒ Follow ups to your queries are effective	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
You know who to call when you have a Follow-up question	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

ONTARIO GRID CONTROL CENTRE'S weekly report is a brief summary of the week's significant transmission and distribution events.

4a. Are you currently receiving ONTARIO GRID CONTROL CENTRE'S (OGCC's) Weekly Report?

Yes	1 – continue
No	2 – skip to Q4F

4b. Do you read OGCC's Weekly Report?

Yes	1
No	2

4c. Do you currently distribute OGCC's Weekly Report internally, to other staff within your organization?

Yes	1
No	2

4d. How satisfied are you with the information provided to you in OGCC's Weekly Report?

Very dissatisfied	Somewhat dissatisfied	Neither satisfied nor dissatisfied	Somewhat satisfied	Or, very satisfied	Don't know (DO NOT READ)
1	2	3	4	5	6

4e. What suggestions do you have to improve it?

None ☐

4f. **IF DO NOT CURRENTLY RECEIVE (Q4A=NO):** Would you like to receive OGCC's Weekly Report via Email?

Yes	1
No	2

5. Are you familiar with Hydro One's Network Operating Customer Website? It is a site that requires a secure login, and provides operating-specific communications, such as: bulletins, briefings, connection agreements, etc.

Yes	1
No	2

5b. **[IF AWARE AT Q5]** Have you ever visited this website?

Yes	1
No	2

5c. **[IF AWARE AT Q5]** How useful is this website to your business?

Not at all useful	Not very useful	Neither	Somewhat useful	Very useful	Don't know (DO NOT READ)
1	2	3	4	5	6

Section 5: Network Management Officer

1. In the past year, have you had contact with your Operating Support NETWORK MANAGEMENT OFFICER at ONTARIO GRID CONTROL CENTRE? This is the person who is identified in your operating Schedule A (or D) as your point of contact for the post incidents inquiry.

Yes	1 – continue
No	2 – skip to Customer Briefings Section 6

2. How satisfied are you with your most recent contact experience with your Network Management Officer?

Very dissatisfied	Somewhat dissatisfied	Neither satisfied nor dissatisfied	Somewhat satisfied	Or, very satisfied	Don't know (DO NOT READ)
1	2	3	4	5	6

3. Using a 1 to 10 scale, where a 1 means you **disagree completely** and a 10 means you **agree completely**, please rate your experience with your Network Management Officer on each of the following statements. Your Network Management Officer …

[RANDOMIZE]	*Disagree Completely*							*Agree Completely*		
	1	2	3	4	5	6	7	8	9	10
ƒ Is always available	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Always returns your calls in a timely manner	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
ƒ Gets you the assistance you need quickly	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Provides all the information you need when you call	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Follows up to make sure your question or problem is resolved	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Is responsive	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

4. In the past year, have you had a meeting with your NETWORK MANAGEMENT OFFICER?

Yes	1
No	2

4b. IF 'YES' ABOVE: In your opinion, what would make for a productive meeting with your Network Management Officer? [DO NOT CODE, ATTACH VERBATIMS TO INDIVIDUAL NAMES IN EXCEL]

Section 6: Customer Briefings

In 2014, there were Customer Briefs provided to 38 different customers since January of 2012. In the 2014 survey 26 customers responded to this question and only 12 of these customers had actually received a customer brief during this timeframe. In 2016, If OGCC can provide a field in the customer list to ID who gets this report and who does not, it will provide a cleaner data set after the fact.

1. A Customer Briefing is a formal written account of an electrical incident showing timelines, analysis and follow up recommendations. Have you received any Customer Briefings from ONTARIO GRID CONTROL CENTRE in the past year?

Yes	1 – continue
No	2 – skip to Section 7

2. How satisfied are you with **Customer Briefings** of incidents?

Very dissatisfied	Somewhat dissatisfied	Neither satisfied nor dissatisfied	Somewhat satisfied	Or, very satisfied	Don't know (DO NOT READ)
1	2	3	4	5	6

3. Please think about **Customer Briefings** from ONTARIO GRID CONTROL CENTRE. For each statement below, please indicate how much you agree or disagree with the statement using a 1 to 10 scale, where a 1 means you disagree completely, and a 10 means you agree completely.

[RANDOMIZE]	*Disagree Completely*							*Agree Completely*		
	1	2	3	4	5	6	7	8	9	10
Customer Briefings on significant events are detailed and informative	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
When follow-up items are identified in Customer Briefings you are notified of their resolution or progress	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
(LQ) Customer Briefings on significant events are timely	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

4. What changes in content or format would you like to see made to Customer Briefings? [DO NOT CODE, ATTACH VERBATIMS TO INDIVIDUAL NAMES IN EXCEL]

None…………☐

Section 7: Final Comments

1. In what areas would greater collaboration with ONTARIO GRID CONTROL CENTRE be beneficial to your business? [DO NOT CODE, ATTACH VERBATIMS TO INDIVIDUAL NAMES IN EXCEL]

2. Could you please identify from the following list the top challenge in regards to your electricity supply and /or your generation capability? [READ APPROPRIATE LIST] [PROVIDE VERBATIM RESPONSE FOR "OTHER"] Allow multiple response but don't ask for it

The energy system infrastructure in your facility	❑
Your company's redundancy/emergency planning	❑
The reliability	❑
Conducting general maintenance on your electrical equipment	❑
Impacts to your facility from power quality issues during normal system conditions (not interruptions)	❑
Other, Specify: ______________________________	❑

3. Thinking about the next 5 years, is your organization planning on…

	Yes	No
Improving energy system infrastructure in your facility	❑	❑
Improving redundancy/emergency planning	❑	❑
Improving reliability	❑	❑
Conducting general maintenance on your electrical equipment	❑	❑
Installing new power sensitive equipment	❑	❑
Upgrading electricity control systems	❑	❑

4. Do you have any further comments that you would like to make about ONTARIO GRID CONTROL CENTRE? [DO NOT CODE, ATTACH VERBATIMS TO INDIVIDUAL NAMES IN EXCEL]

5. ONTARIO GRID CONTROL CENTRE Management has asked if you will allow them to see the results of your specific interview in addition to the aggregate research results to help them better work toward meeting your company's specific needs.

   May we provide your responses to ONTARIO GRID CONTROL CENTRE management?

Yes	1
No	2

IF 2-5B IS YES, ASK…

6. Earlier, you mentioned that you would be interested in receiving automatic notification emails on planned outages. Can we please provide your information to OGCC staff so that they can enroll you in this program?

Yes	1
No	2

IF 3-5C IS YES, ASK…

7. Earlier, you mentioned that you would be interested in receiving Significant Event Notification emails. Can we please provide your information to OGCC staff so that they can enroll you in this program?

Yes	1
No	2

IF 4-4F IS YES, ASK…

8. Earlier, you mentioned that you would be interested in receiving OGCC's Weekly Report via email. Can we please provide your information to OGCC staff so that they can enroll you in this program?

Yes	1
No	2

March 25

NORTHSTAR research partners

STUDY: Ontario Grid Control Centre
Customer Feedback Survey

Time Started:________Time Completed:____________ Elapsed Time:______________

Name:___________________________Telephone: (______)______________________

Company Name:________________________________Title:__________________________________

Address:____

City:_________ Province:____________ Postal Code:______________

Interviewer:______________________________ Date:____________________________

On-line version Introduction:
On behalf of Hydro One's Ontario Grid Control Centre, Northstar Research Partners and their partner, Acrobat Research, both Canadian research firms, thank you for taking the time to complete this service review.

The intent of this review is to obtain your feedback on your operating experience between Hydro One's Ontario Grid Control Centre and your company. We would like to get your feedback using a very brief three or four minute survey. Feedback such as this is essential in the continuing effort to understand your needs surrounding delivery of a reliable electricity service.

Please be assured that your answers are completely confidential and will be used for research purposes only.

Hydro One appreciates the time you spend and the feedback you provide. This short survey takes about 4 minutes.

Telephone call interviews to on-line non-responders:

Hello, I'm __________________ calling on behalf of Hydro One's ONTARIO GRID CONTROL CENTRE. I am from Northstar Research Partners, a Canadian market research firm. May I please speak with (INSERT NAME)?

(ARRANGE CALLBACK AS NEEDED. IF RESPONDENT NOT AVAILABLE, BUT HAS VOICE MAIL OR OTHER MESSAGE SYSTEM, LEAVE A MESSAGE THAT YOU ARE CALLING ABOUT THE REVIEW THEY WERE ASKED TO PARTICIPATE IN BY HYDRO ONE [THEY SHOULD HAVE RECEIVED A LETTER FROM EITHER THEIR NETWORK MANAGEMENT OFFICER (NMO) OR THE MANAGER OF CUSTOMER OF OPERATIONS SUPPORT], LEAVE YOUR NAME AND MESSAGE THAT YOU WILL CALL BACK. LEAVE NO MORE THAN 2 OR 3)

(WHEN CONNECTED TO PERSON, CONTINUE.)
Hello, I'm _____________________________________ calling on behalf of ONTARIO GRID CONTROL CENTRE. I am from Northstar Research Partners, a Canadian market research firm.

Your company should have received a letter from Hydro One about my call. ONTARIO GRID CONTROL CENTRE's goal is to deliver a superior level of customer service and they need feedback from customers like you. We're conducting a brief three or four minute survey for them and would like to include your opinions. May I continue? (IF NECESSARY SAY; please let me assure you that we are not selling anything. Your answers are completely confidential and will be used for research purposes only.)

A. You have a few options for how you want to complete this questionnaire. I can interview you now or later at your preferred time; it would take about 4 minutes. Or I can email you a web site link so you can log onto the questionnaire and complete it online. Which would you prefer?

Telephone ….1	If respondent cannot continue now, ask for date and time when you can call back and finish the review, or give your name as their contact and number they can call you when they have time to complete the review. Date: _____________ Time: ___________a.m./p.m.
Web ………..2	Obtain e-mail address to send the connection for the web-site and the password. Inform respondents that they can start and stop working on the interview and pick up were they left off using the same site and password. e-mail address: …………………………………… I will be sending you an e-mail within 24 hours, and if I haven't received a confirmation from you that you got it and were able to open the site, I will call you in 2 days to be sure you received it and can open the site.
Refuses……..6	IF RESPONDENT REFUSES, ASK: Is there someone else in the company we can call? Record name: Phone number: ( )_________. Thanks and record refusal. Record new contact name as survey contact on the file, and initiate new contact
Do not call again………..7	If respondent absolutely refuses and states never to be called again, thanks and record and log on permanent refusal list

Section 1: Overall Impressions of Hydro One/Ontario Grid Control Centre

For this review, please keep your organization's electricity service in mind, not your residential electricity service. As well, this review pertains specifically to your electrical service from an operational perspective – not to other elements of your relationship with Hydro One, such as billing, future investments, etc.

First, please think about your overall impressions of ONTARIO GRID CONTROL CENTRE.

1. ƒ How satisfied are you with ONTARIO GRID CONTROL CENTRE overall?

Very dissatisfied	Somewhat dissatisfied	Neither satisfied nor dissatisfied	Somewhat satisfied	Or, very satisfied	Don't know (DO NOT READ)
1	2	3	4	5	6

8. Please think about the **staff** at ONTARIO GRID CONTROL CENTRE. For the statement below, please indicate how much you agree or disagree with the statement by using the 1 to 10 scale, where a 1 means you disagree completely, and a 10 means you agree completely. You may use a 1, a 10 or any number in between.

	Disagree Completely							*Agree Completely*		
	1	2	3	4	5	6	7	8	9	10
Staff understand your needs	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

IF Q8_1 ≤ 6, ASK Q8B OPEN
8B. [OPEN-END]. Please provide some examples of when ONTARIO GRID CONTROL CENTRE staff has not understood your needs.

2. 2. the past year, have you had contact with the OUTAGE PLANNING department at ONTARIO GRID CONTROL Centre – the group that handles planned outages?

Yes	1 - Continue
No	2 - Skip to S7-Q2

3.How satisfied are you with…?

	Very dissatisfied	Somewhat dissatisfied	Neither satisfied nor dissatisfied	Somewhat satisfied	Or, very satisfied	Don't know (DO NOT READ)
ƒ Ontario Grid Control Centre's procedures on planned outages	1	2	3	4	5	6

IF Q3 **≤ 3, ASK Q3B** OPEN

3B [OPEN-END]. Please provide some examples of when the ONTARIO GRID CONTROL CENTRE'S procedures on planned outages have not met your needs.

Section 7: Final Comments

2. Do you have any further comments that you would like to make about ONTARIO GRID CONTROL CENTRE? [DO NOT CODE, ATTACH VERBATIMS TO INDIVIDUAL NAMES IN EXCEL]

3. ONTARIO GRID CONTROL CENTRE Management has asked if you will allow them to see the results of your specific interview in addition to the aggregate research results to help them better work toward meeting your company's specific needs.

   May we provide your responses to ONTARIO GRID CONTROL CENTRE management?

Yes	1
No	2

Building Owners and Managers Association (BOMA) INTERROGATORY #034

Reference:

Exhibit B1, Tab 2, Schedule 1, Page 11

Interrogatory:

Please provide a detailed analysis, beyond the comments on that page, of how the consumers' needs and preferences with respect to reliability (frequency of unplanned outages and duration of unplanned outages (LDCs)), and power quality (end users and LDCs) were addressed in the transmission plan and the proposed capital and OM&A expenditures in the test year. Please be as specific as possible.

Response:

Customer needs and preferences with respect to reliability and power quality were addressed in the transmission plan as follows:

- The following list of Lines refurbishment projects and insulator replacement program (S79) will contribute to improving customer delivery point performance (frequency of unplanned interruption and duration of unplanned outages) are as follows (please see Exhibit B1-3-11):

S62	Line Refurbishment Project - C22J/C24Z/C21J/C23Z
S63	Line Refurbishment Project - D2L Dymond x Upper Notch
S64	Line Refurbishment Project - C1A/C2A/C3A
S65	Line Refurbishment Project - N21W/N22W
S66	Line Refurbishment Project - B5G/B6G
S67	Line Refurbishment Project - D2L Upper Notch x Martin River
S68	Line Refurbishment Project - B3/B4
S69	Line Refurbishment Project - A8K/A9K
S70	Line Refurbishment Project - A7L/R1LB and 57M1
S71	Line Refurbishment Project - K1/K2
S72	Line Refurbishment Project - E1C
S73	Line Refurbishment Project - D6V/D7V
S74	Line Refurbishment Project - D2H/D3H

- While all station refurbishment work identified in Exhibit B1, Tab 3, Schedule 11 improves system reliability performance and/or customer delivery point reliability, Beach TS (S08) and Wanstead TS (S17) Station Reinvestment projects will specifically reduce frequency and duration of unplanned outages by upgrading to 230kV supply connections. Nelson TS (S15) will upgrade existing 13.8kV distribution voltage to 27.6kV, and replace deteriorated switchgear with new medium voltage gas insulated switchgear, which improves overall reliability of the station.

- Power Quality measures undertaken in the plan are described in Section 2.7 of Exhibit B1, Tab 3, Schedule 3.

Building Owners and Managers Association (BOMA) INTERROGATORY #035

Reference:

Exhibit B1, Tab 2, Schedule 1, Page 8

Interrogatory:

Why did HONI not, in addition to choosing candidates for one on one meetings, also issue a general invitation to all direct connect customers to attend to have one on one meetings?

Response:

Hydro One felt it was important to ensure that all customers had the opportunity to participate in the customer engagement process and that all customer segments were represented. However, Hydro One expected that in any given timeframe, there would be a number of customers who had more pressing business priorities or could simply not afford to spend several hours of their time in a one-on-one meeting. Thus, in order to gather customer input in a timely manner and also ensure input by all customer segments, Hydro One decided to use a combination of one-on-one meetings, group meetings and an on-line consultation tool. This approach was used to provide at least two different mechanisms for all customers to participate.

Building Owners and Managers Association (BOMA) INTERROGATORY #036

Reference:

Exhibit B1, Tab 2, Schedule 1, Page 9

Interrogatory:

The consultations with customers were done not long before the application was filed (eight to ten weeks). What specific amendments were made to the application to reflect their concerns?

Response:

The findings from customer consultations were used to inform investments included in this application. Some specific amendments are:

1) Increased overall sustainment capital program to maintain reliability;
2) Increased investments in lines area to ensure safety and maintain reliability; and
3) Accelerated air blast breaker investment at Middleport TS to maintain reliability.

In addition, the Power Quality (PQ) program, described in Exhibit B1, Tab 3, Schedule 3, was being developed as a result of the PQ Working Group and the feedback from the customer consultation further supported this PQ work.

Building Owners and Managers Association (BOMA) INTERROGATORY #037

Reference:

Exhibit B1, Tab 2, Schedule 1, Attachment 1

Interrogatory:

(a) Page 1: What day in April was the IPSOS Public Affairs Customer Consultation Report published? When was it delivered to HONI?

(b) Page 8: Please comment on why the attendance at the group session was rather small. Thirty-three individuals representing twenty-two customers from two hundred and sixty three invitees.

(c) Page 9: Why did HONI not present the rate impacts of OM&A costs, load forecasts, or borrowing costs in the operating investments in the presentation to customers?

(d) Page 14: In the IPSOS study, rate increases above five percent were mentioned, along with reliability, as customers' top two concerns, yet HONI's transmission plan and capital investments result in a transmission rate increase of 5.2% in 2018, on top of a 4.7% increase in 2017, in the test year(s). Please discuss.

(e) Can HONI (IPSOS) provide the number of responses falling into each category of response rather than using words such as "few" or "most"?

Response:

a) The first draft of the report was received from Ipsos Reid on March 29, 2016. The content was essentially complete for the purposes of informing development of the investment plan regarding customers' needs and preferences. The final report was received on April 18, 2016.

b) Hydro One has found that predicting customer attendance at group sessions is challenging as their attendance depends upon factors such as the amount of notice provided, their time availability, customers' perceived benefit of participating, and customers' work priorities which can change unexpectedly. Given these factors, Hydro One believes that the group sessions were reasonably well attended and, in combination with the individual customer meetings and online consultation tool, provided a good cross-section of customer needs and preferences. The extent and depth of input provided a comprehensive view of customers' perspectives. With respect to the group sessions, there were several challenges to maximizing customer participation. The customer consultation process was compressed into a very short timeframe, as Hydro One sought to include the results of a customer consultation process into the investment planning process and, at the same time, meet or exceed the OEB's recently-issued expectations regarding customer engagement. Those expectations were issued on February 11, 2016 in Chapter 2 of the "Filing Requirements for Electricity Transmission Applications".

c) In addition to a compressed timeframe to arrange meetings and discussions with customers, this was the first time Hydro One engaged customers in an in-depth review of the type of information presented in Attachment 2 to Exhibit B1, Tab 2, Schedule 2. Thus, although Hydro One provided some context in advance about the planned meetings, customers may not have known what benefit they would achieve by participating in such discussions.

d) Due to the tight schedule, the customer consultation meetings and discussions took place in March, possibly coinciding with customers' pre-existing plans for March break. Lastly, bad weather affected travel and attendance at two of the five group sessions.

e) Though all of these factors do impact rates to varying degrees, given the limited amount of time that customers might be willing to spend on the engagement process, Hydro One decided that priority should be given to hearing customers' needs and preferences regarding the Sustainment capital element, so that the company can reflect them in its investment plan. Sustainment capital has the most direct and controllable impact on reliability performance and risk. Sustainment capital investment has increased significantly over the past three years, and Hydro One sought to understand the needs and preferences of customers with respect to the appropriate balance between Sustainment capital investment compared to reliability risk. Lastly, both OM&A costs and borrowing costs are to some extent influenced by Sustainment investment levels.

f) As noted in the Ipsos report, interruptions and rates (specifically rate increases greater than 5%) were mentioned as the top two concerns, with adequate asset management and replacement coming in close to the top. The financial and health and safety impacts of even short interruptions were highlighted by the examples that many customers described. In addition, the majority of customers who participated in the consultation activities indicated that increased reliability risk was unacceptable and that reliability must not deteriorate. Most participants would support an investment level required to at least maintain the current level of reliability risk. Overall, the feedback was that the right balance is somewhere between

Scenario 2 and 3 in order to reduce reliability risk to some extent. Given this feedback, Hydro One is proposing an investment level that reduces reliability risk modestly over the two years as noted in Exhibit B1, Tab 2, Schedule 4, Table 1 and, in combination with reduced OM&A expenditures, respects customers' concerns regarding rates.

g) Ipsos Reid has responded that, because the consultation was qualitative, it does not typically provide the number of responses as requested. Ipsos Reid advises that this approach is consistent with any qualitative research study or consultation it conducts. Instead, quantities or magnitude are expressed as they were in the report ("a few", "some", "most"). This methodology provides directional, thematic and insight-driven findings.

Building Owners and Managers Association (BOMA) INTERROGATORY #038

Reference:

Exhibit B1, Tab 2, Schedule 1, Attachment 1

Interrogatory:

(a) Customers stated (page 14) that, for the additional expenditure being proposed, they expected to see an increase in reliability performance (fewer, shorter outages), not just a reduced reliability risk, yet HONI has not promised a specific increase in reliability performance. Please discuss.

(b) Why cannot HONI commit (guarantee) a higher reliability performance, in other words, with a specific numerical target or at least range? If it cannot do so for the test year, when will it be able to do so?

(c) Page 36: What does HONI conclude from comments reported that the customers were divided on whether the engagement:

> "got to the right issues, achieved sufficient detail on the issues, the customers are important in the investment plan in order to make a judgement on their preferred investment plan"?

Response:

a and b) Weather causes a significant number of outages and is unpredictable and uncontrollable. Even an optimum planned and designed transmission system has limitations in extreme weather conditions. Exceptional weather events, which exceed design standards, can result in extensive equipment outages and customer interruptions. It would not be prudent or reasonable to guarantee transmission system reliability by investing extensively with more stringent planning and design standards, to avoid extreme weather caused outages and interruptions.

Furthermore, restoration efforts cannot take place under unsafe conditions which are often dependent on uncontrollable factors. Extreme events can result in large scale outages and damage. In such events crews must wait until the extreme weather conditions cease before responding and then work to repair multiple assets over large areas. This negatively impacts the duration of the outages.

Due to these uncontrollable factors and resource constraints, guaranteeing a reliability performance is not practical, however maintaining top quartile reliability for the transmission system is reasonable and using tools such as the reliability risk model helps Hydro One in accomplishing this objective.

c) As noted in the report, customer opinions were mixed on the extent to which the sessions got to the right issues, or achieved sufficient detail on the issues that customers feel are important to the investment plan in order to make a judgement on the preferred investment plan. This was the first time that Hydro One has asked customers to engage in an in-depth review of the reliability performance, related contributing factors, reliability risk and a range of investment scenarios to address risk across the transmission system. This process was a learning experience both from Hydro One’s perspective in terms of the type of information that was important to customers and from our customer’s perspective in terms of the risks, issues and context that Hydro One needs to consider in its investment plan. Given these factors, plus the diversity of customers in terms of type of business, location and reliability experience, the mix of opinions is to be expected but also helps better define the information to be presented in such consultation processes going forward. Hydro One will be working to provide customers with the additional clarity they are seeking in future customer engagement opportunities.

Building Owners and Managers Association (BOMA) INTERROGATORY #039

Reference:

Exhibit B1, Tab 2, Schedule 1, Attachment 1

Interrogatory:

(a) Page 6-Page 9: HONI speaks about managing reliability risk through increased investments but the customers are focused on reliability performance. Please discuss how HONI's planned capex will improve reliability performance, and by how much (target numbers), over what period of time, and at what total cost?

(b) Page 18: Metrics for Power Quality: Some end user parties have asked for a report on power quality every quarter or six months. Will HONI offer this report to all end users? If not, please explain why. What targets and metrics does HONI employ for power quality to its end user customers; to the LDC it supplies, and to what extent have these targets been achieved? What are the issues around power quality? Please discuss thoroughly.

(c) Page 20: Please discuss the comment stated in the middle column, that:
"The challenge is lack of transparency regarding operational load flow control so that we can conduct analysis in house".

(d) Please advise what steps HONI is taking to reduce planned outages.

Response:

a) Please refer to BOMA 38 (Exhibit I, Tab 2, Schedule 38) for discussion relating to reliability performance. Hydro One’s proposed capital expenditures are based on investment needs as described in Exhibit B1, Tab 2, Schedule 5. The majority of these investments are required to replace end of life assets, which have been verified via condition or performance assessment, or laboratory testing, to maintain reliability. In addition, the chosen investments include assets that are deemed to be most impactive to system reliability. Therefore, replacing these deteriorated assets will reduce reliability risk. Details of these investments can be found in Exhibit B1, Tab 3, Schedule 2.

b) To clarify, there was a comment in the Ipsos Consultation Report from one party that noted a request for a power quality report. It is not clear to Hydro One specifically the desired content or purpose of such a report. As a result, Hydro One is not able to commit to fulfilling this request for all end-users.

- Refer to the response for AMPCO17-l (Exhibit I, Tab 3, Schedule 17, Question 1) for a discussion on Power Quality metrics
- Refer to the response for AMPCO17-e (Exhibit I, Tab 3, Schedule 17, Part e) with regards to the results of the Power Quality working group
- Refer to the response for AMPCO17-a (Exhibit I, Tab 3, Schedule 17, Part a) for a discussion on issues relating to Power Quality

c) It is unclear to Hydro One what is being referred to in the comment referenced.

d) Hydro One has executed the following key ongoing initiatives to reduce planned outages:

Hydro One is executing sustainment capital through an integrated investment approach. (Exhibit B1, Tab 3, Schedule 2, page 6). This methodology allows many asset replacement needs to be addressed in an integrated manner, enabling execution bundling opportunities and better long-term coordination with Customers in the area of capital replacements.

With regards to maintenance plan activities, the Planning group has undertaken the long-term alignment of integrating maintenance plans into bundled planned work streams to enable in-year work and outage scheduling in a coordinated manner. Bundling this work considers the configuration of the transmission network and allows for the work to be completed with fewer outages, reducing the impact on customers. This is accomplished through the use of "natural" network configuration bundles, known as Transmission System Outage Groupings (TSOG) which assigns equipment into groupings to aid in the work and outage planning on critical load flow (and delivery point) elements for circuits, buses and auto/power transformers.

TSOGs enable increased opportunities for work bundling allowing schedulers to review all Trouble Calls and Deficiency Reports that are part of the same TSOG, reducing the number of circuits required out-of-service each year for corrective maintenance. In addition, Operations is able to check outstanding notifications and orders on the companion circuit prior to planning outage(s) for preventative maintenance and/or capital work, minimizing coincident event incidents caused by planned outages.

Furthermore, Operations coordinates all planned work from Hydro One Lines of Business from a Capital, Sustainment and Preventative Maintenance basis, attempting to economically and efficiently schedule outages around forecasted Bulk Electric System (BES) Conditions, System Limits and Customer requests. This is accomplished through a series of pre-scheduled meetings with both Hydro One and with Customers from a regional BES perspective.

Since 2012, Hydro One has also reviewed the maintenance strategies on the critical assets that have the greatest impact on network outages on the transmission circuits, power transformers and high voltage & low voltage load buses. Pre-release maintenance planning bundles for over 11,000 assets have been established into optimal maintenance frequency streams, allowing for reduced planned outages scheduled in future years.

Building Owners and Managers Association (BOMA) INTERROGATORY #040

Reference:

Exhibit B1, Tab 2, Schedule 5, Page 4

Interrogatory:

Asset Utilization

(a) How does HONI define "utilization" for each of its major asset classes, transformer (by type), breakers (by type), and lines (by voltage 500, 230, 115). It is loading, over time, frequency of off/on switching, and ramp up, ramp down requirements, the internal cohesion of the assets. What other factors are included in assessing utilization?

(b) Please describe HONI's Asset Risk Assessment methodology in detail, showing what personnel are involved in the process, their qualifications, their numbers, where they fit in the organization, what computer systems, if any, they use, and the output of the exercise? Is there a single document displaying the results of the analysis? What is the process within HONI to review, adopt, amend the output?

Response:

a) Utilization is defined by major asset class, using available and applicable asset characteristics. The utilization of transformers is defined by the historical loading as a ratio of the nameplate capacity rating. Utilization for breakers is a combination of the total count of operations, nameplate fault rating relative system fault rating and fault adjusted operations (cumulative current interrupted). The utilization for transmission lines in the context of the current application is defined as the percentage line loading recorded on the highest Ontario System Peak Demand Day in 2016, August 10th. Please refer to Exhibit I, Tab 1, Schedule 27 for additional information on utilization risk.

b) Exhibit B1, Tab 2, Schedule 5, describes the Asset Risk Assessment (ARA) process. The ARA process is managed and undertaken by a group of transmission asset planners, who are supported by other functions (such as operating, engineering, maintenance, finance, and procurement) within Hydro One. These transmission asset planners fall under Hydro One’s “Network Management Engineer/Officer” job classification. As such, they require an engineering degree or significant technical field experience to carry out this job duty.

The Transmission Asset Management Division reports to the Vice President of Planning who reports, in turn, to Hydro One's Chief Operating Officer. There are approximately 80 asset planners who address Sustainment and Development investment needs for all transmission assets, as described in Exhibit B1, Tab 3, Schedule 1 and Exhibit C1, Tab 2, Schedule 1.

In the ARA process, planners use standard office computer systems and work management software, such as SAP, as well as specialized asset management software, such as Asset Analytics. The output of the ARA process is a collection of investment candidates that undergo an investment optimization process described in Exhibit B1, Tab 2, Schedule 7. Asset information is compiled in SAP.

The ARA output is modified in response to changing circumstances. Examples of changing circumstances include: updated information regarding equipment performance or condition assessments; system evolution which may require planning specifications to change; customer needs and preferences; and compliance requirements. Asset planners prompt changes to the ARA output, which are subsequently stakeholdered and confirmed with others and reviewed and approved by the accountable managers. These changes may lead to new investments, the cancellation or deferral of investments, revised planning specifications, updated estimates, or changes in scope during execution. These changes are governed and controlled by established change management processes within Hydro One.

Building Owners and Managers Association (BOMA) INTERROGATORY #041

Reference:

Exhibit B1, Tab 2, Schedule 3 – Regional Plans

Interrogatory:

(a) Please provide a list of subregions for each of the twenty-one regions.

(b) Aside from the North of Dryden Regional Plan, do any of the other plans completed or in progress have a representative for them from parties other than the IESO, the LDCs, and HONI (or another transmitter)? If not, why not? Why are direct connect customers, APPrO, other producer associations, and other stakeholders not invited to attend?

(c) How do the regional plans, IRRPs, infrastructure plans, ascertain and reflect actual and proposed distributed generation and cogeneration projects in the region? Please discuss fully.

(d) How do the IRRP plans reflect the impact of proposed CDM projects and plans for the region, especially targeted DSM (DSM focussed on the need to avoid a new wires build)?

(e) Are any capital projects not recommended in the various completed regional plans included in the transmission plan:
(i) over the first two years;
(ii) the latter two years.
If so, please identify the project and explain why they are in the plan.

Response:

(a) Please refer to Table 1 in Exhibit B1, Tab 2, Schedule 3 for a list of subregions for each of the regional planning regions.

(b) Yes, the regional plans for Greenstone-Marathon, City of Thunder Bay, and West of Thunder Bay in the Northwest Ontario region also included representatives from parties other than the IESO, distributors and transmitters.

(c) During the needs assessment phase of the regional planning process, a gross load forecast is first developed based on the information provided by the LDCs, transmission connected customers and transmitters. Next the information regarding resources, including distributed generation and cogeneration projects for both actual and proposed projects, is provided by the IESO and by the LDCs. From this information, a net load forecast is developed to study the needs in the region or sub-region and is reconfirmed by the Working Group in the subsequent phases of the regional planning process.

(d) The CDM information is provided by the IESO in consultation with the LDCs. Similar to the DG information, the CDM information is used to develop a net load forecast from the gross load forecast, as discussed in part (c). The CDM information is based on requirements of individual LDCs to achieve conservation targets through the provision of CDM programs to each customer segment in their service area. The CDM energy targets are translated into electricity demand impacts at time of peak for use in regional planning studies. Whereas options such as targeted DSM are considered when evaluating alternatives to address any needs identified.

(e) The capital projects identified in Hydro One's Development capital plan and not identified and/or recommended as part of the regional plans are summarized in the table below. These projects are required to address bulk system or inter-area requirements, customer requests and risk mitigation needs. Further details on each of the projects are provided in Exhibit B1, Tab 3, Schedule 11 Investment Summary Documents.

Ref #	Project Description	Rationale
(i) In-Service within the Test Years		
D01	Clarington TS: Build new 500/230kV Station:	Inter-area Requirement
D24	Nanticoke TS – New Station Service supply	Risk Mitigation
(ii) In-Service in Future Years		
D02	Nanticoke TS: Connect HVDC Lake Erie Circuit	Customer Request
D03	Merivale TS to Hawthorne TS: 230 kV Conductor Upgrade	Inter-area Requirement
D04	East-West Tie Expansion: Station Work	Inter-area Requirement
D20	Toyota Woodstock TS: Upgrade Station	Customer Request
D22	TransCanada: Energy East Pipeline Conversion*	Customer Request

** <u>Note</u>: that TransCanada has advised Hydro One that it does not intend to proceed with the project at this time.*

Building Owners and Managers Association (BOMA) INTERROGATORY #042

Reference:

Exhibit B1, Tab 2, Schedule 4

Interrogatory:

(a) Page 3, Figure 1: Why do customer needs and preferences drive only eight percent of the $1.169 billion in planned sustaining capex in the test years? Please list the investments that respond to customer needs and preferences, and constitute the eight percent, and discuss in what way they respond.

(b) Page 6: Please provide the reliability risk approach used in specific jurisdictions that have informed HONI's decision to begin to use this concept. Please provide the experience in those other specific jurisdictions, available studies, regulatory decisions supporting the approach, and the like (or links to these documents).

(c) Page 12: Please explain the wide variation in ESL of different types of transformers. Please provide the data, or source, for Ontario, on which these estimates are based. Does it take into account asset condition assessment?

(d) Page 14: Please explain where the data cited in line 6 comes from. Please explain fully, including how Figures 2, 3, and 4 should be interpreted. What is the useful life for each category of asset? How many in each category of asset will be beyond ESL in each of the years between 2017 and 2030.

Response:

a) Investments classified as addressing customer needs and preferences are identified on the basis of a direct customer request to Hydro One either explicitly or potentially during the execution of the planned sustainment capital work program. The objective of all sustaining capital investments is detailed in Exhibit B1, Tab 3, Schedule 2.

The following investments drive the eight percent of the 1.169 billion in planned sustainment capital expenditures:

Investment	**Nature of Customer Need/Preference**
Bridgman TS: PT Installation & Revenue Metering Upgrade	Replacement of potential transformers (PTs) at the request of the customer to enhance fault detection capability.
Espanola TS	Investment to address specific reliability concerns of connected industrial customer.
Frontenac TS	Investment to address reliability of customer supply following major equipment outages.
Nelson TS	Investment driven by customer request to convert secondary voltage to 28 kV from 13.8 kV.
Wanstead TS	Investment driven by customer request to reconnect station to the 230 kV transmission system from the 115 kV system.
Carlaw TS A6-A7 Metalclad Switchgear Project	Investments planned in coordination with the planned replacement of customer owned low voltage metalclad switching facilities.
Duplex TS A5-A6 Metalclad Switchgear Project	
Duplex TS A1-A2 Metalclad Switchgear Project	
Main TS A1-A2 Metalclad Switchgear Project	
Strachan TS A5-A6 Metalclad Switchgear Project	
Strachan TS A7-A8 Metalclad Switchgear Project	
Wiltshire TS A3-A4 Metalclad Switchgear Project	
J5D Line Protection and Telecom Replacement	Investment driven by customer request to upgrade telecommunications and protection facilities for international tie-line.
L4D/L51D Line Protection and Telecom Replacement	
Cecil TS Component Replacement	Investments include coordination of the increase in station capacity at the request of the connected customer.
Dufferin TS Component Replacement	
Main TS Component Replacement	
Strachan TS Component Replacement	
N.R.C TS Station Refurbishment	
Overbrook TS T2/T3 Station Refurbishment	
Gordie Howe International Bridge Work	Transmission line relocation required to facilitate construction of Gordie Howe International Bridge.
Re-establish Property Rights	Re-establishment of property rights with customers and land owners.

b) Refer to Staff 14 (b) (Exhibit I, Tab 1, Schedule 14, Part b).

c) Transformers are widely used in Hydro One transmission systems to transfer electric power from one-voltage level to another. To meet different needs in transmission system, Hydro One operates several different types of large transmission class power transformers:

- Autotransformers (500kV, 345kV, 230 kV),
- Phase shifters (230kV),
- Regulators (230kV),
- Reactors (500kV)
- Step-down transformers (230kV, 115kV).

According to Hydro One's historical records, these different types of transformers have variations in their service life due to multiple factors including, size, design, transformer materials and construction, system application, operating conditions and utilization.

It does not take into asset condition assessment.

d) The data in Line 6 is based on the presently installed asset inventory for transformers, breakers and conductors.

The expected service life of transformers, breakers and conductors are detailed in Exhibit B1, Tab 2, Schedule 6.

The table below shows the cumulative number of assets which will be beyond ESL in each of the years between 2017 and 2030. No replacements, planned or emergency, were accounted for in the table below.

	Transformers (units)	**Breakers (units)**	**Conductor (circuit-km)**
2017	225	527	2,105
2018	239	551	2,691
2019	278	611	2,788
2020	287	695	5,813
2021	300	761	6,296
2022	329	905	6,745
2023	335	963	7,107

	Transformers (units)	**Breakers (units)**	**Conductor (circuit-km)**
2024	343	1,091	7,789
2025	352	1,210	8,228
2026	360	1,276	8,449
2027	373	1,460	9,025
2028	389	1,600	9,889
2029	414	1,799	10,204
2030	435	2,034	10,208

Building Owners and Managers Association (BOMA) INTERROGATORY #043

Reference:

Attachment 1 – Reliability Risk Model

Interrogatory:

(a) Why are retirements included as a failure? Please explain fully.

(b) Please provide a copy of the Foster Associates 2014 Asset Failure Analysis dated August 19, 2014, and any update to that study.

(c) The probability of failure seems low on the hazard curve across a long period. What are the increases in the probability of failure year over year for each year depicted in the curve? What is the significance of the ceiling (4.6%)?

(d) What does it mean to say that in 2017, conductors will have a reliability risk of 1.01% (if the investments are approved)?

(e) Does not the fact that the reliability risk index does not determine investments seriously constrain its usefulness?

(f) HONI states at Exhibit A, Tab 3, Schedule 1, Page 10 that:

> "since its last filing, Hydro One has focused on developing an improved understanding and knowledge of the condition of its transmission system".

What specific steps has HONI taken to improve its understanding of the condition of its transmission system in the last two years?

Response:

(a) Refer to Exhibit I, Tab 1, Schedule 20, Part a).

(b) Refer to Exhibit I, Tab 1, Schedule 20, Part b).

(c) Refer to Exhibit I, Tab 1, Schedule 22, Part b) and c).

(d) Based on Exhibit B1 Tab 2 Schedule 4, Attachment 1, page 4 line 7 refers to reliability risk of 1.06% in 2017, not 1.01%. This represents the conditional probability of failure for the population of conductors in 2017 given they have survived to 2016.

(e) No. The reliability risk model is useful as a tool to gauge the impact of Hydro One's investment plan on future transmission system reliability. It also provides a directional indicator to inform the appropriate level and pacing of sustainment investments. Refer to Exhibit I, Tab 1, Schedule 14, Part d).

(f) Hydro One has taken the following steps :

1) Leveraged Asset Analytics tool to identify equipment candidates for investment.
2) Performed field assessment of transmission stations and line structures.
3) Removed in-service suspension insulators and performed laboratory testing.
4) Carried out third party assessment of transformer dissolved gas analysis.
5) Incorporated customer concerns and consultation input.

Building Owners and Managers Association (BOMA) INTERROGATORY #044

Reference:

Exhibit B1, Tab 2, Schedule 6

Interrogatory:

(a) Page 1: Is increased maintenance the preferred option? In other words, is the first option to extend the asset life through increased targeted maintenance? Please discuss the trade-offs.

(b) Page 2: Please define each class of transformer and the use(s) to which they are put.

(c) Page 4: Please describe the basis of HONI's estimate of the expected service life of each type of transformer. What has been the actual experience of useful life of transformers installed over the last seventy-five years by transformer type?

(d) Page 3: What type of transformer makes up the 27 and 22 units in transformer replacements in 2017 and 2018?

(e) Page 4: Please provide the age profile of the transformer fleet in each year from 2006 to 2015, by type of transformer. What has been the replacement rate for transformers from 2006 to 2015?

(f) Page 5, Line 15: Transformer outages represent failure in eighteen percent of delivery points interruptions with multiple supplies over the last ten years. What is the significance of the phrase "with multiple supplies" in that sentence?

(g) Page 9: What would be the likely impact on the frequency and duration of outages if transformer replacement were kept to average of last four years, rather than 3.4% of transformers being replaced in each of the test years?

(h) Page 10: Do you have data or circuit breaker loading? Please provide? Do you hedge against obsolescence by pre-purchase of components of circuit breakers or any other type of asset, and to what extent? What is the value of the inventory you maintain? How much notice do you typically receive?

(i) Page 12; Page 24: On what do you base ESL of each class of circuit breaker and of each class of protection system? Please discuss each type separately.

(j) Page 24: Please detail the likely savings (in depreciation and maintenance) by replacing electromechanical and solid state system with microprocessor based systems.

(k) Page 29: If replacement percentage in 2017 and 2018 were to be the average of previous four years, 2013, 2014, 2015, and 2016, what would be likely impact on the frequency and duration of outages, and on repair costs and lost time? What have been the historical replacement rates from 2006 to 2012 (and the percentage of assets beyond ESL in each of these years)?

(l) Page 31: What have been historical conductor replacement rates annually from 2006 to 2015? What has been the percentage over ESL over the same ten year period?

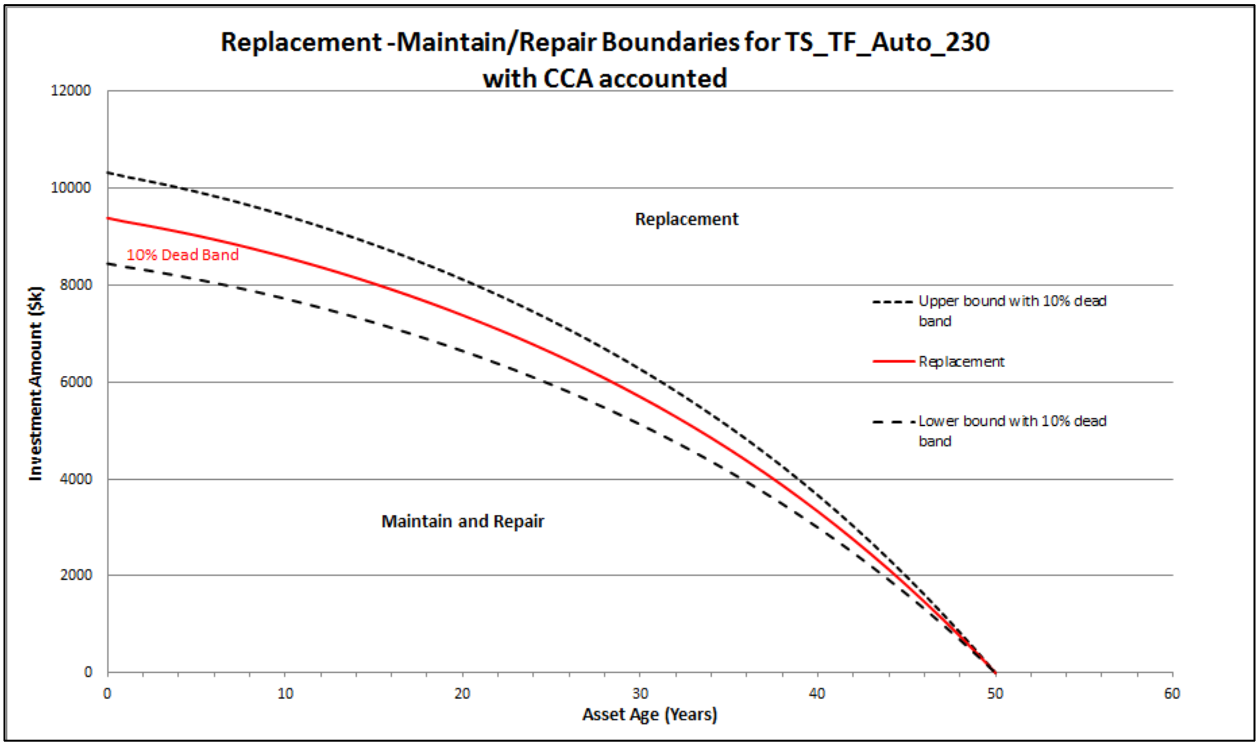
(m) Page 35: Why have condition assessments not been completed in thirty-one percent of conductors? What percentage of conductors will be tested by remote control; over what period of time? When will the new technology be utilized across the system?

(n) Page 42: Why are pole replacing program revisions consistent with bridge year, given the sharp outage frequency decline and the duration decline over the last several years?

(o) Page 54: Please provide a breakdown of any planned replacements, component refurbishments, and new tower coatings in the test year. Please discuss the size, duration, and cost of the metal tower coating program over its expected life.

Response:

a) Hydro One does not have a “default” preferred option. Each case is evaluated independently based on factors such as safety, reliability, life cycle cost, prevailing operating constraints, development opportunity, economic outlook, etc. The economic trade-off is based on the total life cycle cost of the asset, cost of repair or maintain, and how many more years can this asset be expected to be in-service. The result of this trade-off is presented the graph below.



b) Please see below, the definitions for each of class of transformer and their uses.

<u>Power Transformers</u>

Transformers are static devices whose primary purpose is to change AC electric energy at one-voltage level to AC electric energy at another level via induction of a magnetic field.

<u>Step Down Transformers</u>

A step down transformer is to convert a transmission voltage (230kv or 115 kV) to a lower distribution voltage (44kV or 27.6 or 13.8kV).

<u>Autotransformers</u>

An autotransformer is a special case of power transformers, which are used primarily to transform voltages and currents between transmission system voltage levels (between 500 kV and 230 kV and between 230 kV and 115 kV in Hydro One's system). In the case of an autotransformer, there is no electrical isolation between the primary and secondary windings, as part of the winding is common and shared by the primary and secondary. This is a cost-effective solution in applications where the primary to secondary voltage ratios are less than about 2:1 and where the common connection is acceptable.

Phase Shifting Transformers

In an alternating current system, the voltage varies from maximum to minimum 60 times per second, or 60 Hertz. In two systems, both operating at 60 Hertz, there can be a shift between when the reference phase of one system peaks and the other system peaks. This would cause an electrical disturbance if both systems were interconnected. Real power flow in transmission systems is controlled through control of phase differences, therefore phase shifting transformers are employed in selected locations to optimize power flows in the system. Phase shifting transformers are very complex to design and manufacturer and often require a two-tank design.

Shunt Reactors

While strictly speaking, shunt reactors are not transformers, they are similar in construction and considered by Hydro One in the same asset class. A shunt reactor is basically a single winding wound on an iron core and its construction, maintenance and testing is similar to a power transformer. The primary purpose of shunt reactors is to introduce reactance into a circuit. Shunt reactors are normally used to absorb reactive power for voltage control. Series reactors are devices normally used to increase the effective reactance on a circuit to limit fault current.

Regulator Transformers

Regulator transformers are transformers whose sole purpose is to provide voltage regulation through use of an internal tap changer. The nominal incoming and outgoing voltages are the same but the outgoing voltage can be varied slightly in 2.5% increment to satisfy the voltage requirements of connected customers.

c) Please refer to Board Staff #14c (I-01-017c).

d) The types of Transformer for planned replacement in 2017-2018 are as follows:

Year	Auto	Step Down
2017	2	21
2018	1	17

In 2017 and 2018 the number of planned replacement units is 41 with 4 demand replacements per year, totalling to 49 units.

e) Hydro One has provided the data for 2016, but does not have the information readily available on an annual basis.

Transformer Type	Within ESL	Beyond ESL	Total
Autotransformer – 500kV	27	13	40
Autotransformer – 345kV	2	2	4
Autotransformer – 230kV	66	21	87
230 kV Phase Shifter / 230 kV Regulator / 500 kV Reactor	4	5	9
Step Down Transformer – 500 kV	1	0	1
Step Down Transformer – 230 kV	245	47	292
Step Down Transformer – 115 kV	173	115	288
Grand Total	518	203	721

Please see below for transformers replaced from 2006 to 2015

2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
11	5	8	8	10	15	11	19	20	17

f) Multi-circuit supply refers to delivery points that have more than one source of transmission supply. Of the multi-circuit supply delivery point interruptions caused by equipment failures, transformers accounted for 18% of the interruptions.

g) Due to Hydro One's existing transformer demographic profile and asset condition, should the replacement rate be kept to the historical average, it is expected that forced outage frequency and duration will increase.

h) We track loading at the transformer, line and feeder level. For circuit breakers we are more concerned with the current being interrupted being within nameplate as well as the cumulative amount of current interrupted over time.

Where possible we try to order parts in advance of support running out and rely on in-house maintenance expertise to handle obsolete equipment through salvaging of parts from replaced assets.

The value of breaker inventory that we maintain (spares and parts) is approximately $13M.

Notice of discontinuations of support varies by manufacturer.

i) The basis of expected service life (ESL) for breakers is found in exhibit I-01-36.

j) The basis of expected service life (ESL) of each class of protection system assigned by Hydro One has been discussed in OEB staff interrogatories #046 and #047 for PALC (a type of solid state relay) and Microprocessor relays, respectively.

k) Microprocessors require preventative maintenance on a 12 year cycle, while electromechanical relays have an 8 year cycle. As electromechanical and solid state relays are replaced with microprocessor systems Hydro One expects a reduction of approximately 30% in preventive maintenance expense. However this will be achieved over the long term as all electromechanical relays are replaced. Depreciation will increase due to the shorter lifespan of microprocessor units.

l) It is difficult to credibly estimate the impact of keeping the relay fleet replacement rate during test years 2017/18 at the average of the past 3 years plus bridge year (i.e. 3.25% vs. 3.7% for 2017 and 4.4% for 2018) on the frequency and duration of outages caused by protections, and on repair cost and lost time. If that were to happen, Hydro One would not have replaced about 1.2% of its protection fleet, thus increasing the likelihood of relay failure compromising operational flexibility, ability to secure requisite outage to carry out ambitious capital program, unnecessarily increasing the risk to public and potential equipment damage.

m) The implementation of integrated station project will improve efficiencies to address equipment reaching ESL. Hydro One will continue to monitor the number of protections systems being addressed under station bundling project to ensure reliability of the protection systems.

The historical protection fleet replacements over the years 2006-2012 are shown below:

2006*	**2007***	**2008***	**2009**	**2010**	**2011**	**2012**
164	192	198	259	283	389	350

*Estimated

Statistics on protection asset operating beyond their ESL during time period from 2006 to 2012 have not been collected.

n) Conductor replacement rates for the past 5 years are provided in Table 9 of Exhibit B1, Tab 2, Schedule 6. The replacement rates prior to 2012 were in the range of 30 to 50 km per year. Approximately 14% of the conductor fleet was over ESL in 2006. As of 2016, approximately 19% of the conductor fleet are over ESL.

o) Hydro One prioritizes its capital replacement and maintenance works on an ongoing basis. The condition assessment needs of all assets are reviewed and prioritized each year. The previous conductor assessment process required an outage to remove a conductor sample for testing, which has limited the number of samples that can be taken. Starting in 2016, all of conductor assessments will be performed by a non-intrusive and non-destructive device called LineVue. This new technology has been already utilized in the system and Hydro One intends to complete outstanding assessments in the next 5 years.

p) Outage frequency and duration figures only represent the wood pole failures in the past 10 years. The wood pole replacement program is based on field condition assessments. The proposed wood pole replacement plan targets the wood poles confirmed to be at end of life based on condition assessment.

q) All major component replacement rates for the test years have been provided in Exhibit B1, Tab 2, Schedule 6. For the details about tower coating program please refer to section 3.3.2 in this exhibit. Table 11 represents the number of structures targeted for tower coating as there is no tower member replacement work scheduled in the test years.

Building Owners and Managers Association (BOMA) INTERROGATORY #045

Reference:

Exhibit B1, Tab 2, Schedule 7, Page 1

Interrogatory:

Why are planned construction materials forecast to increase in excess of CPI in the test year? What is the source of the number? Please describe Global Insight Inc. On what source(s) is CPI number for Ontario based? Please provide a reference to firms, eg. Bank of Canada, etc.

Response:

IHS Global Insight is the source of the data cited. It measures the price index for all items.

Witness: Mike Penstone

Building Owners and Managers Association (BOMA) INTERROGATORY #046

Reference:

Exhibit B1, Tab 2, Schedule 7, Page 1, Page 2

Interrogatory:

Please distinguish, with reference to Table 1, business drivers and business objectives. Are they the same? If not, please describe each of the business drivers, and how they differ from HONI's objectives, as stated in the application, and what weight is assigned each driver.

Response:

The business drivers and objectives are the same. The business driver weightings are provided in the figure below.

Note: individual weightings are determined through the allocation of 115 total value points

Witness: Mike Penstone

Building Owners and Managers Association (BOMA) INTERROGATORY #047

Reference:

Exhibit B1, Tab 2, Schedule 7, Page 16, Line 10

Interrogatory:

Why would project proposals already be in execution? What will actual 2016 capex be relative to budget? What is the date of HONI's most current estimate? What is year to date capex in 2016?

Response:

Project proposals refer to projects that are not in executing mode. Please see Table 1 in Exhibit B1, Tab 3, Schedule 1 for the 2016 capital forecast. The forecast is as of January 2016 month end. Actual 2016 capital spending levels will be available in 2017. The year-to-date capital expenditures for 2016 is $77.7 million.

Building Owners and Managers Association (BOMA) INTERROGATORY #048

Reference:

Exhibit B1, Tab 3, Schedule 1, Page 1

Interrogatory:

(a) Please provide the table back to 2006.

(b) Page 4: Please provide the analysis HONI has done to conclude that its work program will face outage restraints caused by the planned refurbishments at Darlington and Bruce in 2021 and beyond, and the planned closure of Pickering in 2025. Where, and when, will these outages arise? Please refer to specific outage restraints arising from refurbishments or closure of specific nuclear units, and the cost, and describe clearly and fully the nature of these restraints, either due to proximity of assets to the units, the need to attach additional replacement assets, the need to establish additional transformer lines, breakers, or the specific hardware, such as capacitors. In other words, please document the severity of the restraints. Finally, please assess the measures HONI could take to mitigate those restraints, and allow it to pace its sustainment capex program over a longer period rather than accelerating it over the next five years.

Response:

a) Hydro One has provided the table back to 2012 which meets the filing requirements set by the Board.

b) Please refer to Exhibit I, Tab 2, Schedule 23 for the outage schedule of nuclear units proposed by Bruce Power and Ontario Power Generation as well as a summary of nuclear generation that may be unavailable to the system during the 2021 to 2030 period. Between 2022 to 2030, approximately 3,600 MW to 4,700 MW or more of base load nuclear generation will not be available to the system. This represents significant generation capacity which will need to be replaced with generation from other sources throughout the province. Outages, and in particular long term outages, for major transmission work associated with the connection or delivery of power from generation facilities or import sources are expected to be difficult to obtain.

While Hydro One has not identified the specific investments over the 2022 to 2030 period. Hydro One believes that deferral of significant investments currently planned and forecasted over the next five years would be at risk due to a lack of outage availability for transmission elements. As discussed in Exhibit B1, Tab 2, Schedule 4 and illustrated in Figure 5, Hydro One expects another “bow wave” of assets needing replacements beginning in 2030. In order to effectively manage this large group, a back log of sustainment work cannot be allowed to accumulate during the 2022 to 2030 period. It is possible that some of the work may need to be advanced to appropriately pace the post 2030 work.

Hydro One will monitor closely the resource picture in Ontario and work with the IESO to identify as early as possible further changes to the nuclear outage schedule and other resource availability in order to refine the sustainment plan and ensure timely asset replacement and appropriate pacing of the investments.

Building Owners and Managers Association (BOMA) INTERROGATORY #049

Reference:

Exhibit B1, Tab 3, Schedule 2

Interrogatory:

(a) Please provide the instances in the plan where the maintenance program will be used to extend the asset life, to avoid more expensive capital costs of replacement. Please specify each asset which will be treated in this manner, and the incremental maintenance cost, and the forecast life extension, versus the replacement cost.

(b) Page 7: Please explain in detail the basis for the reduction in capital expenditures of $57 million in the test year due to reconfiguration.

Response:

a) In the context of responding to this IR, "extending" asset life is referring to using maintenance programs to keep the asset functioning and in service for the duration of its useful life. For example, these maintenance programs may include:

   1) Transformer oil leak reduction;
   2) Transformer mid-life refurbishment;
   3) Breaker mid-life refurbishment; and
   4) Corrective maintenance to restore equipment failure.

   The selection and the cost of incremental maintenance are dependent on which assets fail and the cause of failure.

   Please refer to Exhibit I, Tab 1, Schedule 28.

b) Please refer to Exhibit I, Tab 1, Schedule 64.

Building Owners and Managers Association (BOMA) INTERROGATORY #050

Reference:
General

Interrogatory:
Please provide outage data from 2006 to 2015, inclusive. To what extent did LDCs that have multiple delivery points with HONI, increase deliveries from other delivery points to avoid having to interrupt their customers? Please discuss for each of the large LDCs in the Province, including Ottawa Hydro, Horizon, Enersource, Toronto Hydro, PowerStream, Veridian, Windsor, London, Thunder Bay, and Sudbury.

Response:
Outage data with regard to frequency and duration of interruptions has been provided in Exhibit B1, Tab 1, Schedule 3, pages 19-27.

Hydro One does not track transfers of load from LDCs delivery points to other delivery points within the LDC. Moreover, this is not possible is some cases, such as when an LDC has many delivery points supplied from several Hydro One owned stations. The named LDCs own and operate many of the supply breakers at Hydro One owned stations, along with several Customer owned stations (e.g. Municipal Transformer Stations).

Building Owners and Managers Association (BOMA) INTERROGATORY #051

Reference:

IPSOS Study, Page 28

Interrogatory:

Why is HONI charging Network Service Charges for peaks that occur in the off-peak shoulder period, when the customer is not contributing to system peak demand? Please discuss.

Response:

Hydro One charges for Network Service in accordance with the requirements of the Ontario Uniform Transmission Rate Schedule, which states that:

> *"[t]he Network Service Billing Demand is defined as the higher of (a) customer coincident peak demand (MW) in the hour of the month when the total hourly demand of all PTS customers is highest for the month, and (b) 85% of the customer peak demand in any hour during the peak period 7 AM to 7 PM (local time) on weekdays, excluding the holidays as defined by IESO.*

In the uncommon situation when the system peak demand hour for a month occurs outside the peak period hours, customers that are consuming power at that hour do in fact contribute to the system peak for that month and their coincident peak demand is therefore appropriately taken into account in calculating the Network Service charge.

Building Owners and Managers Association (BOMA) INTERROGATORY #052

Reference:

Exhibit B2, Tab 1, Schedule 1

Interrogatory:

(a) On the scorecard, where are the performance targets (outputs) HONI seeks to achieve for each metric, over what period of time, and with what periodic milestone? What is the goal that it is working toward, which the metrics will track?

(b) Why is the metric "satisfaction with outage planning procedures" only measured for the OGCC survey, when there were significant comments made on planned outages in the IPSOS study done for the transmission plan? Why are additional surveys that touch on the metric not gathered, analyzed, and averaged (or otherwise taken into account)?

(c) Why are productivity improvements in OM&A capital, project execution not included as metrics under cost control and asset management?

(d) Under asset management, why is obtaining better data on asset condition not included?

(e) Under financial performance, why are demonstrations of excellent financial management, such as reduction of working capital require, reduction in cost of debt through innovative financial techniques, and the like, not included?

Response:

a) Please see response to Board Staff IR 92 (b) (I-01-092 (b)).

b) Satisfaction with outage planning procedures is also measured in other surveys. Hydro One decided to use the OGCC survey data to measure this metric on the scorecard as it is the OGCC outage planning group that meets and communicates the outages to customers in both the planning (long term and short term) and execution phases, and hence this survey would most accurately capture customer satisfaction with the outage planning.

c) Please see response to Board Staff IR 92 (a), I-01-090 (a). The Tier 2 and Tier 3 metrics that contribute to the two scorecard metrics: Capital Expenditures as a % of Budget; and In-service Additions as a % of OEB-approved plan, appear under Asset Management rather than

Cost Control on the proposed scorecard as they focus more on the management of the spending or investment profile versus the approval.

d) Data quality (i.e. asset condition data) is not a performance-based outcome and is therefore not included on the scorecard. As noted in the response to Board Staff IR 2 (I-01-2), data collection, timely population and data accuracy are all very important to enable business planning investment decision-making, but are not performance-based outcome measures. Measures for data governance represent a series of business processes monitoring and improvements.

e) The metrics on the proposed transmission scorecard for financial performance are aligned with the metrics for financial performance that LDCs report on to the OEB on the distribution scorecard.