

STIKEMAN ELLIOTT

Stikeman Elliott LLP Barristers & Solicitors

5300 Commerce Court West, 199 Bay Street, Toronto, Canada M5L 1B9
Tel: (416) 869-5500 Fax: (416) 947-0866 www.stikeman.com

Direct: (416) 869-5688
E-mail: gzacher@stikeman.com

April 4, 2014
File No.: 101926.1072


Ms. Kirsten Walli
Ontario Energy Board
Yonge-Eglinton Centre
P.O. Box 2319, Suite 2700
2300 Yonge Street
Toronto ON M4P 1E4

Dear Ms. Walli:

**Re: Independent and Electricity System Operator — Fiscal 2014 Fees
Submission for Review: EB – 2013-0381**

Attached please find the IESO's Responses to Interrogatories, which will also be filed through RESS. Two hard copies will be sent to the Board.

Yours truly,


for: Glenn Zacher

/sc
Encl.

cc: Adrian Pye

TORONTO

MONTRÉAL

OTTAWA

CALGARY

VANCOUVER

NEW YORK

LONDON

SYDNEY

ONTARIO ENERGY BOARD

IN THE MATTER OF sections 18 and 19 of the *Electricity Act, 1998*;

AND IN THE MATTER OF a Submission by the Independent Electricity System Operator to the Ontario Energy Board for the review of its proposed expenditure and revenue requirements and the fees which it proposes to charge for the year 2014 in connection with the IESO-controlled grid and IESO-administered markets.

**Responses of the Independent Electricity System Operator to Interrogatories
of Board Staff, CME, Energy Probe and VECC
(April 4, 2014)**

**Responses of the Independent Electricity System Operator to
Interrogatories from Ontario Energy Board Staff**

1 **Interrogatory 1.1.1**

2 **Reference: Exhibit B, Tab 1, Schedule 1** (Letter to Minister of Energy dated October 31, 2013, Page 1)

3 In particular, the 2014 budget included in the Business Plan we are submitting to you today is
4 \$11.8 million less than what was forecast for 2014 in our last multi-year submission, including a \$5.5
5 million reduction in proposed Operations, Maintenance and Administration costs.

6 Please provide details on factors that have contributed to the difference between the two budgets
7 mentioned in the letter referenced above.

8

9 **Response:**

10

11 The difference between the two budgets is largely a result of lower staff costs and amortization. The
12 most recent 2014 budget reflects fewer staff allocated to the operations and more staff allocated to the
13 capital program. Additionally the most recent 2014 budget forecasts fewer capital assets in-service and
14 being amortized during the year.

15

16 **Interrogatory 1.1.2**

17

18 Please indicate whether the IESO foresees any consequences as a result of the reduced OM&A
19 spending? If so how does the IESO intend to mitigate such consequences?

20

21 **Response:**

22

23 OM&A priorities and spending have evolved since the forecast referenced in the cover letter, which
24 was prepared in mid-2011. The IESO's requested revenue requirement for 2014, including projected
25 OM&A spending, is based on the IESO's planned 2014 operations and the IESO believes the level of
26 OM&A spending is appropriate and adequate for these operations.

1 **Interrogatory 1.1.3**

2 **Reference: Exhibit B, Tab 1, Schedule 1 (2014-2016 Business Plan, Page 6)**

3 Prudent financial management is a key priority for the IESO and it recognizes the need to effectively
4 manage costs that are ultimately passed on to customers. The proposed fee for 2014 reflects that
5 commitment, including a proposed \$1 million reduction from last year's OM&A budget of
6 \$112.1million.

7 Please indicate whether the IESO has any guidelines/ policies in place in relation to "prudent financial
8 management" and cost effectiveness. If so, please provide full particulars including copies of available
9 supporting documents.

10

11 **Response:**

12

13 The IESO has controls in place which include budget approval requirements, performance measures,
14 requirements to report against approved budgets, and internal procurement policies. The IESO Board
15 has also established an Organizational Authority Register which authorizes spending thresholds for
16 IESO management levels — i.e., President & CEO, Vice-Presidents, Directors and Managers/Section
17 heads. Any changes to spending thresholds contained within the Organizational Authority Register
18 require the approval of the IESO Board of Directors. The IESO also adheres to the Government of
19 Ontario's Procurement Directive for the purchase of goods and services.

20

21 **Interrogatory 1.1.4**

22

23 Please confirm that the proposed 2014 OM&A budget (\$111.1 million) is 7% higher than last year's
24 actual OM&A spending (\$103.8 million). Please provide detailed information justifying the need for
25 this increase.

26

Response:

Confirmed. Staff costs are the largest contributors to the year-over-year increases anticipated in 2014. As detailed in the responses to Board Staff IRs 1.1.5 and 1.1.6, staff costs are budgeted to increase in 2014 due to contractual increases for remuneration, increased pension and benefit costs as well as increases in training expenses. Costs for contract services and consultants are also expected to increase in 2014 as a result of increased effort in analysis and implementation of market initiatives such as a market development plan, capacity markets review, Ontario two-limit schedule review and Generator Cost Guarantee (GCG) review. The steps the IESO has taken to control staffing costs are explained further in response to Board Staff IR 1.1.7.

Interrogatory 1.1.5

Please provide a breakdown of the OM&A costs by categories for each of 2011, 2012, 2013 and 2014 and comment on material variances over those particular years.

Response:

Please see table below. The variance in staff costs from 2013 to 2014 is, as further explained in response to Board Staff IR 1.2.4, due to delays in filling vacancies in early 2013 due to uncertainty with respect to the proposed merger with the OPA.

(\$ millions)	2011 Actual	2012 Actual	2013 Actual	2014 Budget
Staff costs	83.9	80.7	76.8	81.7
Computer services & equipment	7.9	8.7	9.2	10.0
Contract services & consultants	6.7	7.0	7.3	8.8
Telecommunications	2.8	3.0	3.2	2.8
Other costs	7.3	7.0	7.3	7.8
Total OM&A	108.5	106.4	103.8	111.1

Interrogatory 1.1.6

Please provide a breakdown of total staff costs by relevant categories including pension and other post-employment benefit expenses for each of 2011, 2012, 2013 and 2014 and comment on any material variances over those particular years.

Response:

Please see table below. Staff costs are budgeted to increase in 2014 due to contractual increases for remuneration, increased pension costs due to lower planned versus actual investment income from pension-related investments, as well as increases in staff-related expenses due to increased emphasis on training and development.

(\$ millions)	2011 Actual	2012 Actual	2013 Actual	2014 Budget
Remuneration	52.1	53.1	52.8	55.3
Pension	19.9	14.4	10.1	11.6
Benefits				
- current employment benefits	5.0	5.5	6.0	6.2
- other post-employment benefits	5.6	6.3	6.5	6.8
Staff-related expenses	1.3	1.4	1.4	1.8
Total Staff Costs	83.9	80.7	76.8	81.7

Interrogatory 1.1.7

Please indicate whether the IESO has conducted any recent salary and/or benefits reviews? If so, please provide details and indicate whether any adjustments have been made or will be made by the IESO as result of those reviews.

Response:

The IESO has conducted benchmarking studies as part of its approach to establishing appropriate staff compensation.

1 The compensation costs (salary, benefits & pension) represent the largest single component of IESO
2 costs, comprising more than 60% of IESO expenditures.

3
4 **Non-Represented Group (i.e. Management)**
5

6 IESO Management compensation has been significantly influenced by the Ontario government's
7 economic policy which required compensation restraint within Ontario's public sector. Following the
8 2008/2009 recession the government instructed the public sector and its agencies, including the IESO,
9 to constrain compensation adjustments and workforce growth as part of the government's economic
10 program. In early 2010 the government enacted the *Public Sector Compensation Restraint to Protect Public*
11 *Services Act* (the "Restraint Act") which constrained adjustments to compensation, as well as to pension
12 and benefit provisions, for all non-unionized employees over the period of March 24, 2010 to March 31,
13 2012.
14

15 The last benchmarking review for management was completed by Towers Watson in 2011. Two peer
16 groups were identified. A peer group of 46 organizations was applied to executive/senior
17 management positions and a peer group of 40 organizations was applied to other management
18 positions.
19

20 While the Restraint Act was not enacted until March 2010, the IESO met the government's earlier
21 request for restraint by constraining variable compensation awards to senior management for 2009
22 performance and froze the fixed compensation of its senior management at the start of 2010. Between
23 2011 and 2013, adjustments for fixed compensation for all management staff have been constrained
24 beyond the requirements prescribed by the legislation. As a result, the majority of IESO management
25 staff have not had a fixed compensation adjustment since 2009. The compensation restraint measures,
26 the management salary structure was also frozen between 2009 and 2013. The above factors have also
27 led to significant compression and relativity issues between management staff and represented
28 positions.
29

The results of the Towers Watson benchmarking analysis conducted in 2011 found that the IESO's management staff was at or slightly below the median of the market on an actual total cash compensation basis and slightly above on a total remuneration basis.

NON-REPRESENTED GROUP	Total Cash Compensation		Total Remuneration	
	50 th Percentile	75 th Percentile	50 th Percentile	75 th Percentile
Executives/Senior Management	-3%	-30%	4%	-23%
Management	0%	-15%	6%	-8%

The results of this 2011 analysis was similar to the benchmark analysis completed in 2008 for the executives/senior management and management groups.

Compensation programs are reviewed annually for non-represented staff with regard to business needs, program objectives and design, industry compensation trends, internal compensation relativities, and external market relativities.

Represented Group (i.e. unionized staff)

The last market review of Compensation Programs for represented staff was completed in 2011.

Society represented employees constitute the largest employee group within the IESO. The collective agreement between the IESO and the Society has a "no strike/no lockout" provision that significantly influences the changes in terms and conditions of the collective agreement.

The last market review of the compensation programs for represented staff completed in 2011 found that the IESO was positioned around the 75th percentile of the market on an actual total cash compensation and total remuneration basis.

REPRESENTED GROUP	Total Cash Compensation		Total Remuneration	
	50 th Percentile	75 th Percentile	50 th Percentile	75 th Percentile
Society	12%	0%	17%	3%
PWU	12%	-3%	19%	4%

1 The above market positioning results were used to determine the IESO bargaining agendas in regards
2 to the monetary items for both represented groups.

3
4 The award between the IESO and the Society ordered across the board salary increases of 2% effective
5 January 1, 2013 and January 1, 2014. These salary increases awarded to Society represented staff were
6 up to 0.85% lower than what was awarded during the previous term of the collective agreement.

7
8 The market review of the compensation programs for represented staff is completed prior to
9 bargaining as indicated above.

10
11 The IESO has scheduled a market review of its total remuneration programs for its represented and
12 non-represented groups for the fall of 2014.

13
14 **Interrogatory 1.1.8**

15
16 **Reference: Exhibit B, Tab 1, Schedule 1 (2014-2016 Business Plan, Page 11)**

17 In addition, the IESO will continue to employ focused vendor management and competitive
18 procurement processes to limit inflationary and other increases in computer support, maintenance and
19 equipment costs and in telecommunication costs.

20
21 Please elaborate on the statement referenced above including details regarding the IESO's procurement
22 processes and measures taken to ensure vendor performance delivery remains high while costs are
23 contained.

24
25 **Response:**

26
27 The IESO procurement process promotes open, fair and transparent procurement that delivers value-
28 for-money. As stated in response to Board Staff IR 1.1.3, the IESO adheres to the Government of
29 Ontario's Procurement Directive for the purchase of goods and services (including consulting services).
30 Competitive procurements are often solicited on an open basis (by use of MERX e-tendering system) or

on an invitational basis to qualified proponents. As well, every contract has a clearly identified contract manager whose responsibilities include the completion of a vendor performance assessment which evaluates the vendor's performance in the areas of meeting schedule, cost and quality as well as effective project management. These assessments are taken into account when assessing vendors for future engagements.

Interrogatory 1.1.9

Reference: Exhibit B, Tab 1, Schedule 1 (2014-2016 Business Plan, Page 4)

Over the 2014-16 period, the IESO will need to add new resources — including staff and tools – to manage the evolving challenges posed by cybersecurity. New staff will deal with additional technical work, including threat and data analysis.

Please provide a breakdown of cybersecurity management related costs for 2013 and each year of the planning period and provide explanations where necessary.

Response:

Cybersecurity management related costs

	OM&A
2013 actual	\$1,000,000 Includes labour related costs and contracted services
2014 planned	\$1,300,000 Includes labour related costs, contracted services which increased from 2013 due to on-going support costs for tools implemented in 2013
2015 planned	\$1,500,000 Includes labour related costs with an increase in 1 FTE and contracted services
2016 planned	\$1,500,000 Includes labour related costs, contracted services

Interrogatory 1.1.10

Did the IESO consider other options for managing these issues other than hiring new staff (e.g. contracted services)? If so please provide any available analysis.

Response:

The IESO uses contracted services for noncore business operations. The IESO does not use contracted services for security activities that relate to core operations of the business, or to work that may involve sensitive security issues.

Interrogatory 1.2.1

Reference: Exhibit B, Tab 1, Schedule 1 (2014-2016 Business Plan, Page 11)

	2013		2014		2015		2016	
	Regular	Temp	Regular	Temp	Regular	Temp	Regular	Temp
Wholesale Operations	459	8	451	8	451	7	449	7
Total	459	8	451	8	451	7	449	7

Please confirm whether the staffing levels provided in the table referenced above reflect the IESO's entire staff complement. If this cannot be confirmed, please provide an explanation.

Response:

The staffing levels provided in the table referenced above include only staff associated with IESO wholesale operations and its capital program as outlined in the fees application. The levels do not include students.

Interrogatory 1.2.2

Please reproduce the table referenced above with the IESO's 2011 and 2012 staffing level added to the table and provide comments where necessary.

Response:

	2011		2012	
	Actual	Budget	Actual	Budget
Wholesale Operations	440	450	451	459

Interrogatory 1.2.3

Reference: Exhibit B, Tab 1, Schedule 1 (2014-2016 Business Plan, Page 11)

Changes in staffing levels over the planning period result from a reallocation of effort across the different business functions with the recognition of efficiencies being achieved in some of the ongoing processes.

Please identify the staff positions that the IESO plans to reallocate and the business units affected along with any other relevant information.

Response:

The reallocation of effort to increase efficiency does not necessarily result in staff being eliminated or being moved to other Business Units. However, the IESO has sought to reprioritize and reallocate staff based on evolving demands in a manner that will not increase budgeted staff levels. As described on page 2 of the 2014-2016 Business Plan, the IESO has in the past anticipated and responded to changes such as the increased contribution from renewable generation and the increased incidents of surplus baseload generation. More recently, the IESO supported the Ministry of Energy's review of the Long Term Energy Plan and the IESO will continue to be involved supporting the implementation of the recommendations arising from the LTEP. As the work required of the IESO continues to evolve, the IESO will adapt by efficiently reprioritizing and reallocating staff to respond. The IESO also strives to improve efficiencies with existing functions in order to free up resources for new initiatives or requirements.

1 **Interrogatory 1.2.4**

2 **Reference: 2014-2016 Business Plan, page 8**

3 On the cost side, the IESO has been effective in managing its work programs with operating costs
4 projected to be \$3.0 million below the approved budget, largely the result of the higher than planned
5 position vacancies as it has taken management longer than anticipated to fill all vacant positions in
6 2013.

7

8 Please explain the reasons for the delay in filling the vacant positions in 2013.

9

10 **Response:**

11

12 IESO management significantly limited hiring in 2012 in order to provide flexibility for the anticipated
13 merger with the OPA. Uncertainty with respect to the planned merger continued following the
14 prorogation of the Ontario legislature in the fall of 2012. IESO management recognized the
15 requirement to commence hiring to 2013 budgeted levels in the spring of 2013, especially in key areas
16 including: support of renewable integration and market development, and increased effort focused on
17 refreshing/replacing existing information technology systems. Work began to fill vacancies in the
18 spring however, as explained in response to Board Staff IR 1.2.7, it takes an average of 14 weeks to fill a
19 position once posted.

20

21 **Interrogatory 1.2.5**

22 Please identify the projects and/or business units affected by the hiring delay and describe the
23 impact. If the impacts are minimal from these delays, please indicate whether these positions can be
24 eliminated?

25

26 **Response:**

27

28 The two business units most affected by the hiring delay were Operations and Information &
29 Technology Services (I&TS).

Within Operations, cost recovery work was impacted which resulted in fewer staff to complete connection assessments. This also resulted in lower than budgeted cost recovery revenue.

Within I&TS, the hiring delay resulted in delays to starting projects. Work in the early phases of a project is primarily OM&A.

The most prominent project delayed was the Market Information Management refresh. Multiple smaller projects were delayed by the hiring delay including:

- 1) Notice of Disagreement App Replacement — Implement improvements and efficiencies within the process used to resolve a “Notice of Disagreement” submitted by a market participant.
- 2) Report Technical Refresh — This project will refresh the underlying hardware that hosts the current market-facing IESO Report Site. It will replace the File Routing System (FRS) and the Outbound Report Management System (ORMS) with a vendor-supplied Managed File Transfer (MFI) solution. It will also deliver new methods for Market Participants to access market data.
- 3) Adequacy Reporting Tool Replacement — Replace the existing Adequacy Reporting Tool (PARTool) application with a vendor supported tool in compliance with IT standards
- 4) BITS and Reporting Replacement — This project proposes to provide a replacement Business Intelligence Tool Sets (BITS) with an easy to use interface providing more features and functionality.

Interrogatory 1.2.6

Please provide the number of vacancies filled in 2013 along with the following information for each position filled:

- (a) reason(s) for the vacancy (e.g. new position, retirement...etc.); and
- (b) business unit and function.

Response:

The table below lists vacancies that were filled in 2013 through external resourcing for regular and temporary positions. Vacancies that were resourced internally as promotions, laterals, and temporary developmental rotations are not included.

Business Unit	Function	Reason for vacancy	Regular or Temporary
Markets & Finance	Assistant Engineer/Technical Officer - Settlements	Internal movement	Temporary
Markets & Finance	Wholesale Settlement Agent	Internal movement	Temporary
Markets & Finance	Wholesale Settlement Agent	Internal movement	Temporary
Markets & Finance	Manager, Economic and Policy Analysis	New work requirements	Regular
Corporate & Employee Relations	Administrative Assistant	Internal movement	Regular
Corporate & Employee Relations	Manager, Labour Relations	Internal movement	Regular
Corporate & Employee Relations	Section Head, Business Strategy	New work requirements	Temporary
Corporate & Employee Relations	Employee & Labour Relations Consultant	New work requirements	Regular
Corporate & Employee Relations	Market Relations Consultant	Internal movement	Temporary
Corporate & Employee Relations	Market Services Associate	Extended leave	Temporary
Corporate & Employee Relations	Senor Regulatory Analyst	Vacancy due to death	Temporary
Corporate & Employee Relations	Communications Advisor	Internal movement	Temporary
Information & Technology Services	Assistant Engineer/Officer - Solutions	Internal movement	Temporary
Information & Technology Services	Assistant Engineer/Officer- Solutions	Internal movement	Regular
Information & Technology Services	Information Security Officer	Internal movement	Regular
Information & Technology Services	Business Continuity Program Planner	Retirement	Regular
Information & Technology Services	Facilities Services Coordinator	Internal movement	Regular
Information Technology	Assistant Engineer/officer - Systems	Extended leave	Temporary
Information Technology	Assistant Engineer/officer - Systems	Internal movement	Regular
Operations	Engineer/Technical Officer - Metering Installations	Internal movement	Regular
Operations	Assistant Engineer/Technical Officer-	New work requirements	Temporary

Business Unit	Function	Reason for vacancy	Regular or Temporary
	Training		
Operations	Engineer/Technical Officer-Models & Data	New requirements work	Temporary
Operations	Engineer/Technical Officer-Models & Data	New requirements work	Temporary
Operations	Engineer/Technical Officer	New requirements work	Regular
Operations	Assistant Engineer/Technical Officer	Internal movement	Temporary
Operations	Assistant Engineer/Technical Officer	Internal movement	Temporary
Operations	Administrative Representative	Extended leave	Temporary
Operations	Wholesale Settlement Agent	Internal movement	Temporary
Operations	Ass. Operations Officer	Internal movement	Regular
Operations	Ass. Operations Officer	Extended leave	Regular
Organizational Development	LAN Administrative Assistant	New requirements work	Temporary
Organizational Development	Engineer/Officer-Solutions	New requirements work	Regular
Organizational Development	Engineer/Officer-Solutions	New requirements work	Regular
Organizational Development	Assistant Engineer/Officer - Solutions	Internal movement	Temporary
Organizational Development	Assistant Engineer/ Officer - Systems	Extended Leave	Temporary
Organizational Development	Organizational Development	Internal movement	Regular
Resource Integration	Engineer/Officer - Project Support	Extended leave	Temporary
Resource Integration	Wholesale Settlement Agent	Internal movement	Temporary
Resource Integration	Market Development Analyst	New requirements work	Regular

Interrogatory 1.2.7

Please provide the number of current vacant positions along with the following information for each position:

(a) reason(s) for the vacancy (e.g. new position, retirement...etc.);

(b) business unit and function; and

Response:

On March 30, 2014, there were twenty-four vacant positions posed on the IESO's webpage. These positions are open to internal and external applicants.

Business Unit	Function	Reason for vacancy	Regular or Temporary
Markets & Finance	Administrative Assistant	Internal movement	Temporary
Markets & Finance	Assistant Analyst - Markets	New work requirements	Temporary
Markets & Finance	Assistant Procurement Specialist	New work requirements	Temporary
Markets & Finance	Supervisor, Market Improvement	Extended leave	Regular
Corporate & Employee Relations	Market Relations Consultant (Account Manager)	Internal movement	Regular
Corporate & Employee Relations	Employee and Labour Relations Consultant	Internal movement	Regular
Corporate & Employee Relations	Talent Acquisition Associate	Extended leave	Temporary
Corporate & Employee Relations	Senior Communications Advisor	Internal movement	Regular
Corporate & Employee Relations	Market Services Associate	Extended leave	Temporary
Information & Technology Services	Site Maintainer	Retirement	Regular
Information & Technology Services	Facilities Services Coordinator	Internal movement	Temporary
Information & Technology Services	Senior Project & Portfolio Manager	Internal movement	Regular
Information & Technology Services	Records Management Program Lead	Internal movement	Regular

Business Unit	Function	Reason for vacancy	Regular or Temporary
Information & Technology Services	Engineer/Officer – Systems	Extended leave	Temporary
Information & Technology Services	Assistant Engineer/Officer – Solutions	Internal movement	Regular
Operations	Power System Operator (Operations Officer)	Internal movement	Regular
Operations	Engineer/ Technical Officer – Reliability Compliance Support	Retirement	Regular
Operations	Senior Engineer/Technical Officer	New work requirements	Temporary
Operations	Engineer/Technical Officer	Internal movement	Temporary
Operations	Engineer/Technical Officer – Market Facilitation	New work requirements	Temporary
Operations	Engineer/ Technical Officer – Reliability Compliance Support	Internal movement	Temporary
Operations	Engineer/ Technical Officer – Reliability Compliance Support	New work requirements	Regular
Operations	Engineer/ Technical Officer	Internal movement	Temporary
Operations	Engineer/Technical Officer – Assessments	Internal movement	Temporary

(c) date by which the position is expected to be filled.

Response:

The turnaround time for filling external vacancies is highly variable and influenced by a number of factors, including the uniqueness of the skill requirements, the number of positions being resourced, the time of year the position is posted, etc. The average length of time it took to fill external vacancies in 2013 was 14 weeks, with the greatest length for any position being 31 weeks and the shortest being 4 weeks. It is anticipated this average turnaround time and variability will continue.

Interrogatory 1.2.8

Reference: Exhibit B, Tab 1, Schedule 1 (2014-2016 Business Plan, Page 5)

An increased investment in training and development for new employees will also be essential given that almost a third of the current employees will be eligible for retirement by the end of 2016.

Please elaborate on the statement referenced above and provide details on the IESO's plan to deal with the projected employee retirements.

Response:

In support of the IESO's Training & Development Strategy, a wide range of initiatives have been developed and implemented to cultivate an environment of continuous learning, knowledge transfer and career development. These activities include: the establishment of Training & Development Action Plans specific to the needs of each Business Unit and department; the development of an IESO Training Curriculum based on competency requirements identified for all career levels; provision of manager training focused on how to provide effective performance management and staff development; ongoing delivery of leadership training; regular corporate learning events to share business and industry knowledge, promotion of mentoring programs and encouragement of employees to be active participants in their career development; provision of rotational job opportunities to sustain and build competencies as well as facilitate knowledge transfer; completion of Performance and Potential Assessments twice a year to identify the training and development needs of employees and to ensure those efforts are focused and relevant to support professional growth and career development through employee development plans; and procurement of a Learning Management System to facilitate the delivery of customized training and new employee onboarding.

As a result of these training and development activities, the IESO's succession planning has been strengthened through the identification of talent pools for key positions as well as all senior, middle and entry level management positions. Regular succession planning sessions are conducted to ensure that there are viable candidates for these positions and that actions are being taken to ensure the continued development of a robust talent pipeline of candidates ready to fill positions as they become available due to retirements.

1 **Interrogatory 1.2.9**

2 Please explain whether the IESO has taken any action, to date, to deal with the projected retirement? If
3 no action has been taken to date, please explain why not?

4
5 **Response:**

6 The IESO has taken action to deal with projected retirements as described in the response to Board Staff
7 IR 1.2.8.

8
9 **Interrogatory 2.1.1**

10 **Reference: Exhibit B, Tab 1, Schedule 1 (2014-2016 Business Plan, Page 13)**

11 The IESO continues to have an ongoing need for reprioritization of initiatives it undertakes, and
12 accordingly, the business planning process is not used as the mechanism for capital project
13 approval. Rather, through business planning, an appropriate capital envelope is established for future
14 years, with capital commitments approved individually on an ongoing basis.

15 Please confirm whether the IESO has in place a process for the planning and prioritization of capital
16 expenditures? If so, please provide full details.

17
18 **Response:**

19 The IESO establishes a capital envelope that it works within. A team of senior managers reviews the
20 IESO's existing and proposed capital projects at least quarterly and, as appropriate, reprioritizes the
21 approved projects. The team of senior managers will consider both capital projects to support the
22 evolving needs of the business, and those projects which are necessary to sustain the current
23 capabilities of the business. With respect to sustaining the current capabilities of the business, as
24 described in the response to Board Staff IR1.1.4, it is necessary to reinvest in the IESO's information
25 technology assets on an on-going basis. The IESO utilizes a lifecycle management approach for
26 information technology assets which monitors the life cycle of those information technology assets
27 from implementation to the conclusion of their useful life and indicates when projects which would
28 result in their renewal should take place.

29

1 **Interrogatory 2.1.2**

2 Please provide a breakdown of actual capital spending for each of 2011, 2012 and 2013, indicate
3 whether the projects were discretionary or not, and provide comments were necessary.

5 **Response:**

6 The IESO does not consider any of these projects to be discretionary as each of the projects listed below
7 was necessary to reduce risk to the IESO, the operation of its systems, or provide benefits to Market
8 Participants.

Capital Projects (\$ millions)	2011 Actual	2012 Actual	2013 Actual	
Enhanced Day Ahead Commitment	5.8	-	0.3	10
Renewables Integration	0.1	3.5	3.9	11
Records Management System	0.3	0.6	-	
Cyber Security Management Enhancements	-	0.7	0.4	12
Microsoft License (2012 to 2014)	-	0.6	0.2	
Market Participant Prudential System	-	0.4	0.4	13
Energy Management System (EMS) Refresh	-	-	4.1	14
Revenue Metering System Replacement	-	-	3.5	15
IESO Simulator	-	-	1.6	16
Registration Automation	-	-	1.1	17
Rack & Enclosure Expansion	-	-	0.4	18
Contact Centre System Replacement	-	-	0.3	19
Total Capital Projects (totaling \$1M & above)	6.2	5.8	16.2	20
Other Capital Projects	2.8	4.3	4.6	22
Total Capital Projects	9.0	10.1	20.8	23

25

26 **Interrogatory 2.1.3**

27 Please indicate whether any of the planned 2014 capital projects are discretionary. If so, please indicate
28 whether they can be deferred to 2015 (or later).

29

1 **Response:**

2 The IESO does not consider the 2014 planned capital projects listed on page 19 of the 2014-2016
3 Business Plan as discretionary; all are required projects for the reasons described in the response to
4 Board Staff IR 2.1.2.

5

6 **Interrogatory 2.1.4**

7 **References: Exhibit B, Tab 1, Schedule 1 (2014-2016 Business Plan, Appendix 2: IESO Capital**
8 **Projects)**

9 Please confirm that the “Renewable Integration Initiative” and the “IESO Simulator” project were
10 completed in 2013. If this cannot be confirmed, please explain.

11

12 **Response:**

- 13 1. The Renewable Integration Initiative (RII) was completed in 2013.
14 2. The IESO Simulator Project is still in progress and will be completed and operational in 2014.

15

16 **Interrogatory 2.1.5**

17 With respect to the projects listed below, please provide a description of the work completed/ planned
18 to be completed in each applicable year (i.e. 2013, 2014, and/or 2015) along with a high level cost
19 breakdown:

20

21 **Interrogatory 2.1.5 a) Revenue Metering System Replacement;**

22 **Response:**

23 As stated in response to Board Staff IR 2.1.1, the IESO has a capital envelope it works within for its
24 capital projects and it reviews the priority of the various projects on a regular basis. For individual
25 projects, budgets are established and spending against the approved budget is monitored.

26

Actual costs shown below are up to March 2014 and forecasts are for the remainder of the calendar year.

The Revenue Metering systems have not been upgraded from a technology perspective since market opening in 2002 and are overdue for an upgrade or replacement. Major changes of this type also provide an opportunity to review the business processes that these systems support, and take advantage of tool changes that vendors have implemented to improve efficiency.

	2013	2014	2015
Work Completed	Vendor selection	Design completed	
Work Planned		Build and test new system	Deployment
Capital Costs	\$3,543,000 (Actual)	\$458,000 (Actual) \$3,244,000 (Forecast)	

Interrogatory 2.1.5 b) Energy Management System (EMS) Refresh;

Response:

The Energy Management System is an integral system for managing and monitoring the IESO controlled grid. This system collects real-time information from the field, monitors that the system is being operated within defined limits, and presents the information to the operators in the form of displays and messages. This system requires regular maintenance to ensure adequate vendor support and to remain in compliance with changing NERC standards. The EMS Refresh will also introduce functional improvements that the vendor has included in the latest release, such as visualization enhancements and integration capabilities. These improvements can be used to improve the user's experience and/or meet the business requirements identified in future projects.

	2013	2014	2015
Work Completed	System software and hardware procured and detailed system design review completed	Installation of computer hardware database and application sizing work	
Work Planned		Install, setup and test system software	Deployment
Capital Costs	US \$3,610,000 (Actual) for vendor payment \$296,000 for computer hardware purchases and labour (Actual)	US \$1,530,000 vendor payment (Forecast) \$1,240,000 for computer hardware and labour (Forecast)	US \$510,000 final vendor payment (Forecast) \$600,000 labour (Forecast)

Interrogatory 2.1.5 c) Registration Automation;

Response

Registration Automation project will replace the IESO paper forms based solution for registering participants with an electronic forms solution. This project includes a complete review of the registration processes and the introduction of a Business Process Management solution to implement the new registration process.

	2013	2014	2015
Work Completed	Five business processes completed	None	

	2013	2014	2015
Work Planned		Complete four business processes	None
Capital Costs	\$1,088,000 (Actual)	\$76,000 (Actual) \$427,000 (Forecast)	\$0

Interrogatory 2.1.5 d) Oracle 11g RAC Technical Refresh;

Response:

The IESO uses an Oracle Real Application Cluster (RAC) database for all its critical databases. The existing solution is at version 10 and runs on older HP Blade servers. The project will upgrade the Oracle RAC infrastructure to version 11, running on higher performance servers.

	2013	2014	2015
Work Completed	None	Hardware installation completed	
Work Planned		Build new Oracle cluster, complete testing and then deploy	None
Capital Costs	\$ 0	\$1,386,000 (Actual) \$217,000 (Forecast)	\$ 0

Interrogatory 2.1.5 e) Market Information Management Refresh;

Response:

The Market Information Management (MIM) system which has been in service since 2002 supports Market Participant transaction submissions, including the submission of bids, offers, non-dispatchable

schedules and physical bilateral contracts. MIM validates and stores these transactions and makes them available for downstream processing in the day-ahead, real-time and settlements timeframes.

	2013	2014	2015
Work Completed	None		
Work Planned		Procure Hardware and software and complete database development	Hardware/software installation and deployment.
Capital Costs	\$0	\$1,400,000 (Forecast)	\$1,400,000 (Forecast)

Board Staff 2.1.5 f) Tier 1 Storage Refresh;

Response:

The Tier 1 Storage Refresh initiative will refresh the primary storage arrays the IESO uses for both file systems and databases to achieve improved performance and additional capacity to meet the needs of the business for the next four years.

	2013	2014	2015
Work Completed	None	Vendor selected	
Work Planned		Design, hardware, procurement, testing and deployment	None
Capital Costs	\$0	\$3,000,000 (Forecast)	\$0

Interrogatory 2.1.5 g) Interchange Automation;

Response:

This project will review processes and tools associated with managing interchange transactions. The project will implement changes to allow us to better integrate with the evolving processes in neighbouring jurisdictions and allow us to continue to be compliant with evolving NERC standards.

	2013	2014	2015
Work Completed	None		
Work Planned		Vendor selection and system design	Implementation, testing and deployment
Capital Costs	\$0	\$2,000,000 (Forecast)	\$1,300,000 (Forecast)

Interrogatory 2.1.5 h) Market Interface System Refresh; and

Response:

The Market Interface System (MIS) is a key system for managing the IESO Administered Markets (IAM). This system determines the dispatch schedules for the IAM. A refresh of the system is required to maintain reliability of the MIS and provision a solution that will support the recommended enhancements to the IAM.

	2013	2014	2015
Work Completed	None		

	2013	2014	2015
Work Planned		Vendor selection and system design	Software development, procure required infrastructure
Capital Costs	\$0	\$1,500,000 (Forecast)	\$5,000,000 (Forecast)

Interrogatory 2.1.5 i) Outage Management Replacement.

Response:

The Outage Management solution is responsible for collecting and presenting outages that may impact the operation of the IESO-controlled grid or IESO-administered markets. This solution provides interfaces that support both participant requirements and internal user requirements. This solution is due for replacement and discussions with other Independent System Operators and with our participants have identified opportunities for improving the processes and tools associated with managing outages.

	2013	2014	2015
Work Completed	Interim process redesign	Vendor selection	
Work Planned		Vendor Engagement, design and solution specification	Testing and deployment
Capital Costs	\$8,000	\$1,500,000 (Forecast over 2014 & 2015)	

Interrogatory 2.1.6

Please provide a high level description of the "Other Capital Projects" (i.e. projects totaling less than \$1M) completed in 2013 and planned for 2014.

1 **Response:**

2 Capital projects less than \$1M completed in 2013 are shown below:

3

Refresh Control Log	Refresh the electronic logging tool used by Control Room and Market Facilitation staff. This project provides a logging solution that is configurable to IESO needs, allows for customization and operates on standard IESO technology platforms. The old Control Room Log was implemented in the early 2000s and the technology used was at end of life.
Aspen Refresh	Provides continued centralized file serving capability to the IESO and the IESO users; improves speed of service by deploying newer and better hardware/ software; provides much needed storage capacity. The old ASPEN was at end of life.
Refresh Microsoft SQL Server Technology	Put in place a new Microsoft SQL Server Database Solution with 5 years of continuous vendor maintenance and support. The new infrastructure solution has higher performance servers with more memory and CPU, upgraded operating systems and SQL database software which is capable of hosting existing and anticipated IESO business solutions. Both the Server hardware and software were at end of life.
Adaptive Authentication	This project provides the required authentication enhancements to complete the replacement of PKI (public key infrastructure) digital certificates. The proposed enhancements will use additional information besides the user name and password to validate the individual.
Network Refresh Phase 1 - Network Segmentation	The current IESO network consists of CISCO components that were put into service on 2004. The purpose of this first of the three projects called "Network Refresh Phase-1 - Network Segmentation" is to replace the end-user access layer network switches.
Interchange Scheduler Usability Enhancements	This project modified the Data Dispatch Management System - Interchange Scheduler (DDMS-IS) to provide usability enhancements.
Kronos Workforce Solution 6.3 Upgrade	This project upgraded the Kronos Workforce Solution to a vendor supported release. Some minor configuration changes were implemented to Kronos Workforce Solution to improve efficiency of the system. The older version of Kronos was at end of life.

Migrate Outage Scheduler Database	This project performed a refresh of the database infrastructure used to support the Outage Scheduler solution. The Outage Scheduler solution was one of the three remaining solutions using the Oracle 8.1.7 database infrastructure service and was at end of life. A refresh of the Outage Scheduler solution is one step towards the decommissioning the database infrastructure.
Online Credit Card Input	An initiative to meet payment credit card industry standards, to reduce financial risks associated with cyber security and improve the customer's experience with self-serve credit card processing
Enterprise Cyber Security Management (ECSM)	This project modernized IESO cyber security infrastructure by enhancing security monitoring and analysis capabilities. The products replaced by this project were all at end of life.
IESO Voice Communication System Replacement Stage 1	The refresh of Private Branch Exchange (PBX) and desk set phones. The Nortel PBX replaced by the project was at end of life.
RTU Router Upgrade and MPLS Migration (closed)	This project replaced the Remote Terminal Unit (RTU) routers termination devices at all directly connected RTU sites by migrating all sites to the new Wide Area Network - Multi Protocol Label Switching (MPLS) service which is replacing the existing Frame Relay network service which was at end of life. It also procured 20 additional network termination devices for up to 20 new sites expected to come online over the next 3 years as a result of the Ontario Green Button Initiative.

1 Capital projects less than \$1M planned for 2014 are shown below:

State Estimator Improvements	The State Estimator solution is foundational to IESO's real time security analysis. When the State Estimator fails, there is increased effort to monitor the ICG for stability and the IESO may need to operate the grid and IAM more conservatively. By reducing the duration and frequency of State Estimator failures, the IESO can operate the ICG more efficiently.
Implementation of New TR Maintenance Process	In September 2013, the IESO Board approved a new process to maintain the confidence level for the Transmission Rights (TR) based on a review of the existing process through stakeholder engagement initiative SE-110. Changes are required to implement this new process. In addition, the IESO wants to improve its internal controls and processes to ensure TR auctions are conducted with minimum human error.

Interrogatory 3.1.1

Reference: Exhibit B, Tab 1, Schedule 1 (2014-2016 Business Plan, Page 6)

The IESO is proposing to change its fee structure to also include energy volumes equal to the output from generation embedded in local distribution networks. Currently, those volumes are not included in the determination of the IESO fee because the fee is based on energy withdrawals net of embedded generation.

Please indicate whether the IESO's proposal to change its fee structure from net billing to gross billing received appropriate stakeholder support and agreement. Please provide full details including whether any parties disagreed with this approach and if so, what was the nature or reason(s) for the disagreement.

Response:

The IESO's fee proposal was presented and discussed at multiple meetings of the IESO's Stakeholder Advisory Committee (SAC) between 2011 and 2013 (please see response to CME 3(a) & 3 (b) for more information on the dates of the meetings and materials presented at these meetings). The SAC is composed of stakeholder constituencies with a direct interest in IESO decisions. Members are appointed by the IESO Board of Directors from nominees submitted by the various constituencies. In discussions at these SAC meetings, a number of stakeholders expressed support for the fee proposal. For example, some members representing LDCs:

- agreed the proposed change would be revenue neutral for the LDCs;
- agreed that if the gross amount is being collected by LDCs for the IESO fee, then it is fair that this gross amount be remitted to the IESO; and
- agreed that it may be unfair to charge consumers differently based on their location, and all consumers should pay their fair share.

No SAC member opposed the IESO's fee proposal, however, some questioned it or expressed initial reservations. In particular, some:

- questioned whether the proposal would work within the OEBs Direct Benefits Framework where LDCs do not keep the variance resulting from any over-collection of the Wholesale

Market Service Charge (WMSC);

- questioned whether there would be increased costs to some customers if benefits from WMSC over-collection was returned to customers of LDCs with embedded generation; and
- asked for more detail to better understand the full implications for their constituencies.

The IESO addressed these and other concerns at an October 30, 2013 SAC meeting and in follow-up discussions with several SAC members. At the October 30 SAC meeting and in these follow up meetings, the IESO clarified that some but not all of the WMSC over-collection is used to fund the Direct Benefits Framework and the IESO's fee proposal, while reducing the WMSC over-collection, is not expected to reduce the over-collection enough to impact the funds available for the Direct Benefits Framework.¹

The presentation made at the October 30, 2013 SAC meeting, and other presentations which included material on the proposal, are included in Appendix A. Please find the minutes of the IESO's Stakeholder Advisory Committee meetings on the IESO's website at: <http://www.ieso.ca/Pages/Participate/Stakeholder-Engagement/Stakeholder-Advisory-Committee.aspx>

Interrogatory 3.1.2

Please indicate whether the IESO's proposed fee structure has been adopted by other electricity market and system operators in other jurisdictions. If so, please provide full particulars.

Response:

Other North American system operators have different fee structures than the IESO and so it is not

¹ The Board confirmed that the WMSC over-collects in its EB-2013-0067 Decision which reset the WMSC rate from 0.52 cents/kWh to 0.44 cents/kWh and in which the Board stated:

The current WMS rate of 0.52 cents/kWh has in the past and currently over-collects the charges paid to the IESO, resulting in consistent credit balances being accumulated in Account 1580. This over-collection is eventually returned to customers when the individual electricity distributors dispose of Account 1580, either in an incentive regulation mechanism rate application (provided that the disposition threshold is met) or as part of a cost of service rate application. In the third quarter of 2012, the balance in Account 1580 for all electricity distributors in Ontario was a credit balance of \$350.4 million. (emphasis added)

possible to directly compare them. For instance, other system operators recover costs by embedding charges in network access, wheeling and other usage charges

Interrogatory 3.1.3

Please provide the total cost associated with the proposed changes to the current fee structure.

Response:

As no new systems or hardware are required for the proposed fee change there is no additional cost to the IESO to implement the change.

Interrogatory 3.1.4

Reference: Exhibit B, Tab 1, Schedule 1 (2014-2016 Business Plan, Page 10)

The IESO's proposed usage fee for 2014 of \$0.803 per MWh represents a 2.3% reduction from our current fee of \$0.822/MWh.

Please confirm that the proposed usage fee of \$0.803/MWh is based on total energy volumes including embedded generation.

Response:

Confirmed

Interrogatory 3.1.5

Please confirm that the current usage fee of \$0.822/MWh is based on energy volumes excluding embedded generation (the "Current Calculation Methodology").

1 **Response:**

2 Confirmed

3

4 **Interrogatory 3.1.6**

5 Please calculate the IESO's 2014 usage fee based on the Current Calculation Methodology and provide
6 the resulting \$/MWh fee.

7

8 **Response:**

9

10 \$0.833/MWh. See EB-2013-0381ExB/T1/S 3/Page 1 of 4 for the methodology.

11

**Responses of the Independent Electricity System Operator to
Interrogatories from BOMA**

1 **Interrogatory 1**

2 **Reference: Exhibit B, Tab 1, Schedule 1 (2014-2016 Business Plan, Page 10)**

3 The IESO's proposed usage fee for 2014 of \$0.803 per MWh represents a 2.3% reduction from our
4 current fee of \$0.822/MWh

5 Ref: ExA, T1, Sch1; Ex B, T1, Sch1, p10; Ex B, T4, Sch1, App A, Table 2

6 Please confirm that by calculating the usage fee on a gross withdrawal basis, the IESO usage fee can be
7 lowered by 2.3% (from 0.822/mwh to 0.803/mwh).

8

9 **Response:**

10

11 Confirmed.

12 **Interrogatory 2a) Please provide the 2014 usage fees provided, including:**

13 full explanations and reference to source documents for:

14 Alberta - AESO

15 New England - IESO

16 New York - IESO

17 PJM

18 MISO

19

20 **Response:**

21

22 The IESO understands that BOMA is asking the IESO to identify the usage fee for each of the ISO's
23 listed and explain how the fee is structured. As stated in response to Board Staff IR 3.1.2, the IESO's
24 usage fee is not directly comparable to charges of other system operators, including those listed above.
25 Each of these system operators operates under different regulatory and physical environments and
26 they have different charge types, usage fees or applicable tariffs. Some of the system operators are

responsible for multi-state systems and MISO is responsible for a system spanning multiple states and the province of Alberta. Extensive review and analysis would be required to explain the various fee structures.

Information on the tariffs or charges of the listed ISO's are available at the following URLs:

Alberta - AESO

<http://www.aeso.ca/tariff/8739.html>

New England - IESO

http://www.iso-ne.com/stlmnts/iso_rto_tariff/rate_dev/index.html

New York - IESO

http://www.nyiso.com/public/markets_operations/documents/tariffs/index.jsp

PJM

<http://www.pjm.com/committees-and-groups/committees/fc/fc-rates.aspx>

MISO

<https://www.misoenergy.org/Library/Tariff/Pages/Tariff.aspx>

Interrogatory 2b) Please indicate the amount of distributed generation capacity and energy output relative to total system capacity and energy and output for each of the IESOs listed.

Response:

The IESO does not have this information and it is not readily available on the website of the listed ISOs.

Interrogatory 3 a)

Ref: Ex C, T1, Sch1, p22

Please provide the IESO staff complement or number of approved positions (FTES) as of December 31, 2013.

Response:

The number of approved positions as of December 31, 2013 was 467.

1 **Interrogatory 3 b)** Please provide the number of positions vacant.

2 **Response:**

3

4 There were 14 vacancies as of December 31, 2013 included extended leaves and unfilled positions.

5 **Interrogatory 3 c)** Please provide the average percentage vacancy rate for the IESO for each of the
6 last five years.

7 **Response:**

8

9 The IESO's average percentage vacancy rate for each of the last five years was as follows:

Year	2009	2010	2011	2012	2013
%	1.7	2.2	2.5	3.3	5.2

10 **Interrogatory 4**

11 Ex3, T1, Sch1, p14 [NOTE: should be Ex B/ T1/ Sch1/ p14]

12 **Interrogatory 4 a)** Please provide a detailed discussion of the extent of the IESO's managerial
13 accountability.

14 **Response:**

15

16 The IESO was designated as the Smart Metering Entity (SME) under the *Electricity Act, 1998 (Ontario)*
17 for the purpose of coordinating the implementation of the Government of Ontario's Smart Metering
18 Initiative (SMI), a key component of which is the Meter Data Management and Repository (MDM/R).
19 Bill 21 ("*Energy Conservation Leadership Act, 2006*"), which received Royal Assent on March 28, 2007,
20 includes the establishment of a "Smart Metering Entity" to administer the MDM/R and other
21 objectives of the SMI. The IESO was subsequently named the SME by Ontario Regulation 393/07, as
22 amended by Ontario Regulation 233/08. The obligations of the SME as set out in the *Electricity Act*, are
23 discharged through a combination of the efforts of IESO employees and service providers under
24 contract to the IESO. The day-to-day fulfillment of IESO's obligations as the SME is fulfilled by the
25 IESO's Smart Metering department reporting to the Director, Smart Metering within IESO's I&TS

business unit. The Information and Technology Services business unit is headed by the VP, I&TS and Chief Information Officer.

The IESO Board of Directors established the SME Steering Committee to represent the interests of stakeholders of the MDM/R and provide advice to the SME. The IESO also established the MDM/R Technical Panel as a sub-committee of the SME Steering Committee to provide input on detailed technical aspects of the MDM/R and provide recommendations to the SME and SME Steering Committee on changes to the MDM/R.

Interrogatory 4 b) Please provide a detailed discussion of the extent of the IESO's financial accountability, for the SME.

Response:

The IESO as the SME is required to report to the OEB on the operations of the MDM/R and financial results of the SME distinct and separate from that of the IESO administered markets.

On March 28, 2013, the Ontario Energy Board issued its Decision and Order in the Smart Metering Charge proceeding (EB-2012-0100 and EB-2012-0211) and ordered that beginning May 1, 2013, the SME will levy and collect a Smart Metering Charge from all distributors identified in the Board's annual Yearbook of Electricity Distributors. In its Decision, the OEB also approved the Smart Metering Agreement for Distributors to be ratified by the SME and each distributor to facilitate the operation of the MDM/R and collection of the charge. The Smart Metering Agreement has subsequently been ratified by the SME and all distributors receiving or eligible to receive service from the MDM/R.

Interrogatory 5

Does the IESO's proposal to shift the incidence of its usage fee not run counter to government policy to encourage increased use of distributed generation, including CHP? (See, for example, Directive from Minister Chiarelli to Ontario Power Authority, dated December 16, 2013).

1 **Response:**

2

3 The IESO's proposal will not impact amounts paid to distributed generators and is not intended or
4 expected to discourage the use of distributed generation in Ontario. The IESO's proposal, if approved,
5 will only reduce the IESO fee/KWh paid by an LDCs customers

6

**Responses of the Independent Electricity System Operator to
Interrogatories from CME**

1 Interrogatory 1

2 Ref: Ex A, T 1, S 1, page 6 of 9, and Ex B, T 1, S 1

3 The IESO has filed its 2014 to 2016 Business Plan in support of the 2014 fees submission for review.
4 CME wishes to better understand the business planning process implemented by the IESO to develop
5 this business plan. To this end, CME requests the following additional information:

6 Interrogatory 1 a) Please provide a detailed description of the IESO's business planning process;

7 Response:

8 Business planning is the process used at the IESO to identify the business needs and resource
9 requirements necessary to support the IESO's business needs and strategy. The IESO management
10 team work together to prioritize deliverables based on risk assessments.

11 The Business Planning process is conducted annually and starts in early spring with a strategic
12 planning exercise. During this process, the management team is tasked with prioritizing deliverables,
13 identifying risks and determining the required resources.

14 The IESO's Board of Directors and senior management solicit initial input from Stakeholder Advisory
15 Committee (SAC) members and further meetings are held with SAC members to discuss IESO
16 priorities and to develop the business plan. In the late summer or early fall, the IESO presents its
17 business plan at a formal SAC meeting (attended by IESO Board members) and solicits further
18 feedback. This past year, an initial meeting was held with SAC members on April 3, 2013² and the
19 IESO presented the business plan at a formal SAC meeting on August 14, 2013.

² Materials from the SACs April 3, 2013 meeting where the members priorities were presented are available at:
<http://www.ieso.ca/Pages/Participate/Stakeholder-Engagement/Stakeholder-Advisory-Committee.aspx>

1 The plan is then updated based on SAC input and submitted for approval to the IESO Board of
2 Directors, usually in September. Once approved by the Board of Directors, the Business Plan is sent to
3 the Minister of Energy, who must approve it before the IESO's annual fees submission is filed with the
4 Board. The Business Plan is filed in support of the IESO's fees submission. It spans three years,
5 however, the OEB approves a fee for only the upcoming year. The OEB-approved fee establishes the
6 IESO's annual budget.

7 **Interrogatory 1 b)** Did the IESO's Board of Directors provide any instruction or direction on how the
8 IESO should prepare the 2014 to 2016 Business Plan? If so, please produce all such instructions or
9 directions.

10 **Response:**

11
12 CME has asked for information to better understand the business planning process undertaken by the
13 IESO to develop its 2014 to 2016 Business Plan (the "Business Plan"). Specifically, CME requests a
14 detailed description of the IESO's business planning process. As well, CME requests information
15 relating to the IESO Board of Directors' and senior management's deliberations and decisions
16 regarding development of the Business Plan, and copies of all documents provided to the IESO's Board
17 of Directors concerning the development of the Business Plan.

18 It is the IESO's position that the specific approvals requested by the IESO in its Fees Submission and
19 evidence filed in support are relevant and CME may ask interrogatories about the requested approvals,
20 the reasons for the requested approvals and the supporting evidence. This includes the right to ask
21 relevant interrogatory questions about the contents of the Business Plan and financial statements.
22 Conversely, it is the IESO's position that the underlying deliberations and processes that the IESO
23 undertook to develop the Business Plan are not relevant

24 In the circumstances, the IESO will provide a general overview of the business planning process it
25 undertook to develop its Business Plan, but the IESO will not provide information requested by CME
26 relating to the IESO Board of Directors' and senior management's specific deliberations and decisions
27 relating to development of the Business Plan; nor will the IESO provide all the documents provided to
28 the IESO's Board of Directors concerning development of the Business Plan.

Interrogatory 1 c) Were any instructions provided to the IESO business units by IESO senior management on how to prepare either the 2014 to 2016 Business Plan, or planning information required by the 2014 to 2016 Business Plan? If so, please produce those instructions or directions.

Response:

This interrogatory is refused; see explanation above.

Interrogatory 1 d) Please provide all presentations, PowerPoint, memoranda or other written material presented to the IESO Board of Directors dealing with the development of the 2014 to 2016 Business Plan. In answering this question, please ensure that you also provide all presentations, PowerPoint, memoranda or other written material presented to the Board of Directors dealing with the draft Business Plan.

Response:

This interrogatory is refused; see explanation above.

Interrogatory 1 e) Did the IESO Board of Directors make any changes, or provide any feedback or other comments in response to either the draft 2014 to 2016 Business Plan or portions thereof? If yes, please provide a summary of the changes, feedback or comments. If the changes, feedback or comments were provided in written form, please produce the written documents.

Response:

This interrogatory is refused; see explanation above.

Interrogatory 2

On October 1, 2013, Bruce Campbell provided the proposed 2014 to 2016 Business Plan to the Minister of Energy. In the second paragraph of that letter, Mr. Campbell states that the resulting revenues would be significantly lower than previous forecasts issued as part of the 2012 to 2014 Business Plan which was the last multi-year business year submitted to the Minister of Energy.

1 **Interrogatory 2 a)** Please confirm that the Minister of Energy did not approve that 2012 to 2014
2 Business Plan.

3 **Response:**

4 Confirmed, the Minister did not approve the IESO's 2012-2014 Business Plan

5 **Interrogatory 2 b)** Please provide a copy of the 2012 to 2014 Business Plan referred to in
6 Mr. Campbell's October 1, 2013 correspondence.

7

8 **Response:**

9 This interrogatory is refused. The IESO's 2012 to 2014 Business Plan was prepared in mid-2011, more
10 than 2 years ago; it was not approved by the Minister; and, it has not been filed in support of the
11 current IESO Fees Submission (or any previous IESO Fees Submission). It is therefore not relevant.

12 **Interrogatory 3**

13

14 **Ref: Ex B, T 1, S 1, and Board Staff Interrogatory 3.1.1.**

15 Board Staff Interrogatory 3.1.1 has asked whether the IESO's proposal to change its fee structure from
16 net billing to gross billing received appropriate stakeholder support and agreement. CME wishes to
17 better understand the stakeholder consultative process undertaken by the IESO. To this end, please:

18 **Interrogatory 3 a)** Provide a summary of all stakeholder presentations or meetings; and

19 **Response:**

20

21 Minutes of all stakeholder meetings are available and sorted by date on the IESO website at:
22 [http://www.ieso.ca/Pages/Participate/Stakeholder-Engagement/Stakeholder-Advisory-](http://www.ieso.ca/Pages/Participate/Stakeholder-Engagement/Stakeholder-Advisory-Committee.aspx)
23 [Committee.aspx](http://www.ieso.ca/Pages/Participate/Stakeholder-Engagement/Stakeholder-Advisory-Committee.aspx).

24 The SAC meetings at which the fee proposal was on the Agenda or discussed are listed in the response
25 to CME 3 b).

Interrogatory 3 b) Provide all presentations, PowerPoints, memoranda, or other written documents provided by the IESO to its stakeholders

Response

Please see following documents which are attached as Appendix A.

- October 30, 2013 — IESOs Stakeholder Advisory Committee
 - Power point presentation followed by discussion
 - http://www.ieso.ca/Documents/consult/sac/sac-20130814-ieso_draft_business_plan_final.pdf
- August 14, 2013 — IESOs Stakeholder Advisory Committee
 - Pg 14 of the PowerPoint presentation on the IESOs draft 2014-2016 Business Plan discussed the proposal to collect the fee on a gross basis
 - http://www.ieso.ca/Documents/consult/sac/sac-20130814-ieso_draft_business_plan_final.pdf
- November 26, 2012 — IESOs Stakeholder Advisory Committee
 - Pg 16 of the PowerPoint presentation on the IESOs draft 2013 Proposed IESO Business Plan discussed the proposal to collect the fee on a gross basis
 - http://www.ieso.ca/Documents/consult/sac/sac-20121126-Item3_2013_Proposed_IESO_Business_Plan.pdf

**Responses of the Independent Electricity System Operator to
Interrogatories from Energy Probe**

1 Interrogatory 1

2 Ref: Exhibit C, Tab 1, Schedule 1

3 On February 21, 2014 the IESO submitted Supplementary Evidence containing the Actual 2013
4 Financial Results. Contained within that evidence were revised figures for usage fees – which were
5 revised higher to \$128.3 million from the forecast of \$126 million, submitted by the IESO on November
6 4, 2013 and the \$123.9 million figure in its original budget. The IESO also lowered its Total Costs to
7 \$118.8 million from its original forecast of \$127.8 million.

8 **Interrogatory 1 a)** Does the IESO expect to revise its 2014 figure for usage fees higher, as well as
9 lower its figure for costs?

10 **Response:**

11

12 The IESO does not intend to revise its 2014 figure for usage fees or lower its figure for 2014 costs. The
13 increased revenues and decreased costs experienced in 2013 are accounted for in the 2013 surplus, and
14 the amount the IESO proposes to rebate; they do not impact the 2014 usage fee or 2014 costs.

15 **Interrogatory 1 b)** Currently the IESO is projecting usage fees of \$126.6 million for 2014 (Exhibit
16 B, Tab 1, Schedule 1), but expects total energy volumes – including embedded generation – to rise from
17 153.3 (gross TWh) to 157.6 (gross TWh). Would the higher demand result in greater revenue from
18 usage fees?

19 **Response:**

20

21 No. The Ontario demand and exports projected for 2013 were 153.3 TWh and did not include
22 embedded generation while the Ontario demand and exports budgeted for 2014 are 157.6 TWh and
23 does include embedded generation as shown on page 10 of the IESO's 2014-2016 Business plan. In
24 calculating the fee for 2014 the IESO, as described in Exhibit B, Tab 1, Schedule 3, used a forecast

revenue requirement of \$126.6 million and total energy volumes of 157.6 TWh, resulting in the proposed fee of \$0.803/MWh. The methodology used to calculate the proposed fee is described on page 3.

Interrogatory 2

Ref: Exhibit B, Tab 1, Schedule 1

In the Financial Outlook 2014-2016, the IESO estimates that its Market-related Interest Income will more than triple over the next three years, “primarily as a consequence of assumed increases in interest rates.” (Exhibit B, Tab 1, Schedule 1, page 10) According to forecasts from economists at Canada’s five largest banks, interest rates are not expected to move until – at the earliest – the second half of 2015. Furthermore, interest rates are not expected to be meaningfully higher until 2016.

Interrogatory 2 a) Is this in line with forecasts made by the IESO?

Response:

The market interest rates forecast utilized in the IESO’s 2014-2016 plan was based on economic information available in June 2013, at which time the IESO reviewed the data and forecasts from various Canadian financial institutions. Based on this review, the IESO assumed modest growth in the general economy and modest rises in short term annual interest rates through to 2016. Since June 2013, the forecasted data through to 2016 has moderated which has translated into weaker / moderate interest rates over the short term.

Interrogatory 2 b) And, if not, will this have a meaningful impact on the IESO’s forecast for Market-related Interest Income?

Response:

Long and short term interest rates forecasts are subject to many variables and can differ significantly from actual results. If short term interest rates through to 2016 remain similar to those experienced in 2013 and early 2014, the impact on the IESO’s market interest income is forecasted to be approximately

50% lower income over the three year period than what was forecasted in the IESO's 2014-2016 plan. On the other hand, if interest rates remain lower than planned, the IESO should benefit from having lower interest expense on its debt.

Interrogatory 3

Ref: Exhibit B, Tab 1, Schedule 1

In the summary of capital spending over the 2013-2016 period (Exhibit B, Tab 1, Schedule 1, page 12) the IESO expects to end spending on its Renewable Integration Initiative in 2013.

Interrogatory 3 a) Is that reasonable, considering the IESO is also expecting embedded generation to increase meaningfully over the next three years?

Response:

Yes. The increase in embedded generation was taken into account in the design of the Renewable Integration Initiative.

Interrogatory 3 b) Would the IESO not have to continually update and invest in its ability to safely integrate this renewable power into the grid?

Response:

No updates or further investments are anticipated or planned to integrate renewable embedded generation; as noted, the increase in embedded generation was taken into account in the design of the Renewable Integration Initiative.

Interrogatory 4

Ref: Exhibit B, Tab 4, Schedule 1

The IESO argues that moving to a gross billing fee will result in a more equitable distribution of the usage fee (Exhibit B, Tab 4, Schedule 1, page 17). Customers of LDCs with large amounts of embedded generation will no longer receive a discount in the amount of usage fee that they pay.

Interrogatory 4 a) If the target for the introduction of 10,700 MW of renewable power by 2018 laid out in Ontario's Long Term Energy Plan is borne out, is there not a risk that the reverse could come true?

Response:

No. If the IESO's gross load fee proposal is approved, then all LDC customers will be treated equally by paying the IESO fee based on the same charge determinant — i.e., their total consumption, irrespective of what portion is supplied by embedded vis-à-vis directly-connected generation; see Exhibit B, Tab 4, Schedule 1, pp. 8-9.]

Interrogatory 4 b) Would customers of LDCs with large amounts of embedded generation then be subsidizing a transmission system they don't use? And would this situation violate the user-pay model?

Response:

No subsidization of the transmission system or violation of the user-pay model will result from the IESO's fee proposal. The IESO's proposal to collect its fee on a gross basis rather than a net basis will not impact transmission charges. Currently customers of an LDC with embedded generation do not pay transmission charges for energy generated within the LDC; the IESO's proposal will not change this.

The IESO's proposal will also not violate the user-pay principle. Rather, it is consistent with the user-pay principle because the IESO is not only responsible for administering the transmission grid and wholesale market, but for facilitating the incorporation of large amounts of distribution-connected embedded generation into the IESO's reliable operation of the provincial electricity system and,

1 therefore, there is no distinguishable difference between the IESO costs caused by customers served by
2 distributors with embedded generation as compared to those without embedded generation. See
3 Exhibit B, Tab 4, Schedule 1, pp. 4-6 and 13-14.

4

**Responses of the Independent Electricity System Operator to
Interrogatories from VECC**

1 Interrogatory 1

2 Ref: Ex B, T 1, S 1, 2014-2016 Business Plan, page 7, 2013 Projected Financial Results and

3 Ext C, T 1, S 1, Supplementary Evidence, page 1, 2013 Actual Financial Results

4 **Preamble:** There are some significant line item differences between projected 2013 revenues and
5 costs and actual 2013 revenues and costs.

6 **Interrogatory 1 a)** When were the 2013 projections that appear in the business plan developed?

7 **Response:**

8 They were developed in June 2013.

9 **Interrogatory 1 b)** Please explain, by line item if possible, the drivers of material differences between
10 projected 2013 and actual 2013 results for both revenue and cost components.

11 **Response:**

12 The driver of the material difference for revenue was, as stated in the Financial Update, the
13 increase in usage fee revenues, particularly from higher than forecast exports.

14 Forecast staff costs were lower than projected by \$3.2 million primarily due to lower than
15 projected net pension expenses of \$1.8 million (see below) and staff vacancies throughout the
16 year resulting in savings of \$1.4 million.

17 Contract services and consultants were \$1.8 million below the projected cost level as a result of
18 some work being delayed or deferred until 2014, some effort being completed in-house as well
19 as some lower than expected engagements.

20

1 **OM&A Pension Expense**

(\$ millions)	2013	2013	Variance
	Actual	Projected in 2014-16 B/Plan	
Pension Costs	10.8	10.8	-
Capitalized Pension	(1.0)	(0.9)	0.1
SERP Investment Income	(4.0)	(2.3)	1.7
PSAB Transition Costs	4.3	4.3	-
OM&A Pension Expense (net)	10.1	11.9	1.8

2 **Interrogatory 1 c)** Please provide a table containing historical budgeted, projected, and actual results
3 for both cost and revenue components as provided in the referenced tables.

4 **Response:**

5

(\$ millions)	2011			2012		
	Actual	Projection	Budget	Actual	Projection	Budget
Usage Fees	124.5	126.6	126.0	125.8	126.0	127.8
Cost Recovery for Services	2.9	2.8	2.9	2.7	2.9	2.7
Market-related Interest Income	0.6	0.8	-	1.3	1.2	1.4
Total Revenues	128.0	130.2	128.9	129.8	130.1	131.9
OM&A Costs	108.5	112.2	113.0	106.4	108.2	115.1
Amortization	12.9	12.8	14.3	13.0	13.0	15.8
Net Interest	0.6	0.8	1.0	0.8	0.8	1.0
Total Costs	122.0	125.8	128.3	120.3	122.0	131.9
Operating Surplus	6.0	4.4	0.6	9.6	8.1	-
2010 Adjustments for Accounting Standard Change	(2.5)					
Rebates due to Market Participants	3.5	4.4	0.6	9.6	8.1	-

6 **Interrogatory 1 d)** Does the IESO consider that its budgets and projections of revenues and costs
7 separately, have, overall, been historically accurate?

8

1 **Response:**

2 Yes

3 **Interrogatory 2**

4 **Ref:** Ex B, T 1, S 1, 2014-2016 Business Plan

5

6 **Interrogatory 2 a)** Has the IESO benchmarked its compensation packages for executives,
7 management, and staff against any comparator group recently? If so, please provide the results of any
8 such benchmarking.

9 **Response:**

10 Please refer to Board Staff IR # 1.1.7 for details.

11 **Interrogatory 2 b)**

12

13 Does the IESO monitor or assess its operational performance against any quantified metrics? If so,
14 please provide a list of all such metrics with a summary of the IESO's historical performance versus the
15 metrics.

16 **Response:**

17 Yes, the IESO monitors and assesses its performance through its Corporate Performance Measures
18 (CPMs). The CPMs are intended to measure the IESO's operational and strategic progress towards
19 achieving its mission and vision. The IESO's vision and mission, as stated on the homepage of its
20 website at <http://www.ieso.ca/Pages/About-the-IESO/Vision-and-Mission.aspx> , are

21 **Vision:**

22 A reliable, efficient and innovative electricity marketplace that enables informed decisions by all
23 participants, including consumers.

Mission:

The IESO acts in the interests of the people of Ontario to ensure a reliable and effective Ontario electricity sector. To accomplish this, the IESO will:

- Operate a reliable power system through forecasting and meeting real-time electricity demand and coordinating power flows with its interconnections
- Provide customers, or their agents, with relevant, timely and transparent information and services needed to enable their effective participation in Ontario's electricity marketplace
- Foster needed change in the way that electricity is produced, delivered and consumed
- Develop collaborative relationships with participants and stakeholders
- Provide superior service in the administration of an efficient wholesale electricity market
- Attract, retain and develop a talented, highly professional workforce

While measures tend to be relatively constant from year-to-year, targets are altered depending on industry developments and key aspects of the business the IESO is seeking to.

The excel table attached as Appendix B provides a summary of recurring quantitative based targets and the IESO's performance for the 2010 – 2013 period.

The IESO's 2014 CPMs are available at

<http://www.ieso.ca/Documents/2014%20Corporate%20Performance%20Measures.pdf>

Interrogatory 2 c) Do the compensation packages offered by the IESO to its executives, management, and staff include any incentive components? If so, please provide details of such incentives including targets and other determinants along with budgeted and actual amounts paid under any such incentive packages.

Response:

Executives

The IESO's variable pay plan is a significant component of the total compensation for executives, with the target variable pay component being 65% of salary for the CEO and 50% of salary for the Vice-Presidents.

The IESO Board annually establishes corporate performance measures relating to the IESO's business priorities during the business planning process. The Board also sets more specific corporate performance targets relating to these measures and 70% of executives' variable pay is based on the extent to which the IESO meets these performance targets.

The remaining 30% of executives' variable compensation is based on an evaluation of major accountabilities and individual deliverables against predetermined success criteria established for each executive in their individual employee performance agreements. The CEO approves the criteria for executives other than himself; the CEO's individual measures are determined and assessed by the Board.

A rating scale ranging from partially meeting expectations to exceeding expectations is used to assess the results for each corporate and individual performance objective as well as to calculate the associated variable pay amount. Corporate and individual results may be rated from zero to 1.5 times the target variable pay amount. A payout factor is then determined and applied to the target variable pay amount for each executive.

Management

The IESO implemented on January 1 2013 a redesigned compensation program within the framework established by relevant public sector compensation legislation. The revisions to the program reflected a number of considerations including the need to align the structure of the IESO's management compensation program with that in the public sector by reducing the management variable pay levels and reducing the number of management staff eligible for variable pay. As a result, only Directors remain eligible for variable pay at the management level with a weighting of 70% for the corporate performance measures based on the above performance objectives and 30% for the individual

performance measures. Management staff below the Director level are no longer eligible for variable pay.

Represented Staff

Unionized staff are not eligible for variable pay.

For 2013, the budgeted and actual amounts expended on variable pay were respectively \$1,286,587 and \$1,099,407.

Interrogatory 3

Ref: Ex C, T 1, S 1, Supplementary Evidence, page 1, 2013 Actual Financial Results

Preamble: The actual 2013 results indicate that there will be a rebate of \$12.6M to “market participants.”

Interrogatory 3 a)

Does the amount of this rebate indicate that the IESO’s fees should have been lower for 2013?

Response:

In the absence of a Ministerial-approved business plan, the IESO was not able to submit a revenue requirement application for 2013. Instead, the previously approved interim usage fee continued through 2013. As outlined at page 2 of Ex A /T1/S 1, the IESO fee was made interim by the OEB effective January 1, 2012. Since 2005, the IESO has held an approved deferral regulatory account in the amount of \$5.0 million. Any annual operating surplus is returned to market participants through a rebate.

Interrogatory 3 b)

Historically, what has been the IESO’s experience regarding the amount of rebates in each past year?

1 **Response:**

2 The operating surplus for 2009 and 2010 was \$4.3 million and \$18.3 million respectively. The operating
3 surplus for 2011, 2012 and 2013 is \$3.5 million, \$9.6 million and \$12.6 million respectively, which results
4 in a total accumulated surplus to be rebated to market participants of \$25.7 million.

5 **Interrogatory 3 c)** Please provide a high-level breakdown showing the allocation of the 2013 rebate
6 among market participants.

7 **Response:**

8 The total of \$25.7 million will be rebated to market participants based on their yearly (2011, 2012 and
9 2013) proportionate quantity of energy withdrawn from the grid (including exports). A breakdown of
10 LDCs, Directly Connected and Export quantities for the respective years that will be used in the rebate
11 calculation is shown below.

	Year 2011		Year 2012		Year 2013	
	MWh	Rebate as % of Total AQEW & SQEW	MWh	Rebate as % of Total AQEW & SQEW	MWh	Rebate as % of Total AQEW & SQEW
LDC	120,411,955.91	79%	119,664,434.10	78%	118,695,133.65	76%
Directly Connected	18,214,033.01	12%	18,808,221.96	12%	19,117,054.40	12%
Exports	12,848,427.83	8%	14,627,085.76	10%	18,308,190.52	12%
Total AQEW & SQEW	151,474,416.75	100%	153,099,741.82	100%	156,120,378.57	100%

12
13 **Interrogatory 3 d)** Under the IESO's fee proposal, does the IESO expect any material change in
14 respect to actual rebates or the allocation of any such rebates.

15 **Response:**

16 The IESO does not expect any material change to actual rebates or the allocation of such rebates. If the
17 recommended change to gross billing is approved by the Board, the rebate allocated to market

- 1 participants for 2014 onwards will be based on proportionate quantity of energy withdrawn from the
- 2 grid (including exports) plus reported embedded generation for the year.

2013 Proposed IESO Business Plan

Presentation to Stakeholder Advisory Committee
November 26, 2012



- Addressing future reliability needs
- Workforce and IT infrastructure renewal
- Consumer and stakeholder engagement
- Continued market development
- Prudent financial management

Preparing for tomorrow (1)

- Increasing amounts of renewable generation being added to the system ... both grid-connected and embedded
- Value being demonstrated from new tools, processes and training being implemented to address reliability concerns arising from increased renewable integration
- Focus for 2013 is implementing changes to allow for the dispatch of wind by the fourth quarter



- Potential for grid-connected storage and distributed energy storage systems to:
 - enable better utilization of variable renewable resources
 - create new sources and types of ancillary services
 - absorb surplus baseload generation
 - provide congestion management and peak load relief
- IESO to develop methodology to evaluate storage proposals, identify storage opportunities, and develop market construct

Preparing for tomorrow (3)

- In 2012, the IESO launched a Request for Proposals (RFP) to procure a limited amount of regulation service from alternative technologies such as load management and energy storage
- Work will continue into 2013 to incorporate these technologies into IESO systems and processes
- Help inform further changes required to incorporate these technologies on a larger scale

Preparing for tomorrow (4)

- Energy modeling initiative will allow the IESO to perform forward energy simulations to better understand, assess and develop future operating strategies and address potential operating issues
- In 2013 the IESO will begin using this program to augment 18 month outlooks by providing energy assessments
- IESO will also review outage approval process to provide earlier approvals to give market participants additional time and certainty for their maintenance activities and assist the IESO in meeting its reliability needs.

- Electricity Market Forum report outlines recommendations for future development of the market
- IESO initiated work on these recommendations in 2012 and will complete the following in 2013:
 - review of the Hourly Ontario Energy Price (HOEP)
 - review of the Global Adjustment (GA)
 - review the viability and potential benefits of more frequent scheduling on the interties

Reconnecting Supply and Demand:

**How Improving Electricity Pricing Can Help Integrate
A Changing Supply Mix, Increase Efficiency
and Empower Customers**

Report of the Chair of
the Electricity Market Forum
George Vegh
December 2011

- Attrition rate poses challenges in transferring expertise and knowledge as seasoned technical staff retire ... IESO needs to address this
- Developing power system training simulator to prepare system operators and meet new regulated training standards
- Skills and knowledge transfer a priority

- IESO continuing its efforts to substantively upgrade or replace the majority of its IT software infrastructure
- Most systems used today have supported IESO grid and market operations since 2002
- Work to replace or upgrade these systems is coordinated over several years as cost of maintaining and operating aging systems starts to outweigh value of keeping them in operation

Key IT projects for 2013 that impact customers:

- Renewables Integration Initiative
- Revenue Metering System & Process Change
- Registration Automation
- Market Interface System Refresh



- IESO planning a number of initiatives to improve consumers' ability to respond to price signals and benefit from their actions
 - progressing with Electricity Market Forum recommendations
 - provide opportunities for aggregated load to participate in the IESO markets as outlined above
 - redesign of the IESO web site which will include an enhanced data section created with end user needs in mind
 - market research to develop and test communication materials, tools and information consumers can use to manage their electricity use



- Continue to support the Smart Grid Forum
- Participate in a Demand Side Management Task Force being proposed by the Corporate Partners segment of the Smart Grid Forum
- Continue to work with the Ontario Power Authority to ensure that real-time dispatch needs are factored in to the design and deployment of demand response programs

- IESO will be amending SAC representation framework to reflect increased role of aggregators, energy service providers and renewable generators
- Annual stakeholder summit will kick off advisory efforts for the year
- Quarterly stakeholder conference calls to review changes underway and to increase awareness of upcoming and ongoing consultations

- Ontario Energy Board (OEB) granted Order for IESO to continue existing usage fee (\$0.822 per kWh) into 2012
- Following the cancellation of Bill 75 the Deputy Minister of Energy requested IESO to submit business plan for 2013
- IESO proposed Business Plan addresses stakeholder priorities identified in March 2012
- IESO will seek approval of its business plan from the Minister of Energy and then submit proposed revenue requirement and fee to the Ontario Energy Board

- Proposed revenue requirement in 2013 of \$127.8 million in costs
 - almost \$12 million lower than the 2013 costs anticipated in the last Business Plan submitted to the Ontario Energy Board
- Forecast revenue requirement for 2013 results in a proposed fee for 2013 of \$0.789 per MWh
 - 4% reduction from our current fee of \$0.822/MWh
 - approximately 18% less than the fee charged 10 years ago

- In 2013 the IESO is proposing to change the charge determinant used in calculating its fee to include embedded generation within the distribution system
- New methodology more fairly reflects the changing nature of the grid
- 2013 energy volumes on a gross load basis, inclusive of embedded generation, are projected to be 157.0 TWh

- IESO has been designated as the interim Smart Meter Entity (SME) responsible for the project management of the development, delivery and operation of the Meter Data Management Repository (MDM/R)
- Application filed with the Ontario Energy Board for a fee to recover its investment and ongoing operational costs associated with the MDM/R
- Following the establishment of the Smart Metering Charge, and subject to government concurrence, the IESO plans to transition the governance of the MDM/R to local distribution companies

- Maintain reliability
- Prepare for future operations
- Efficiently manage our business
- Effectively contribute to the development and implementation of government policy

Proposed Change to IESO Fee Calculation

Stakeholder Advisory Committee
October 30, 2013



- IESO fee is currently based on “net” withdrawals
 - Based on allocated quantity of energy withdrawn (AQEW) plus scheduled quantity of exports withdrawn (SQEW)
- IESO is proposing to change its fee structure to also include energy volumes equal to the output from generation embedded in local distributions networks, i.e. “gross” withdrawals
 - Does not include generation behind the meter
- Revenue neutral to IESO and local distribution companies (LDCs)

- LDC collects Wholesale Market Service charges (including IESO fee) from its customers based on the total electricity consumed
- LDC remits payment to IESO based on the amount of electricity it withdraws from the IESO-controlled grid
 - Metered embedded generation reduces the amount of electricity supplied from the IESO-controlled grid
- IESO proposal would reduce the variances between amount collected by LDCs and amount remitted to IESO

What Happens to Over-Collection?

- Over-collections are kept in account 1580 ($RVSA_{WMS}$)
- Any over-collections will be refunded to customers once the account reaches a pre-defined level

Assume a revenue requirement of \$217.83

	MWh			Net basis @ \$0.822/MWh (based on 265 MWh)			Gross basis @ \$0.7261/MWh (based 300 MWh)		
LDC	LDCs load	Embedded Gen	Grid With- drawal	LDCs pay to IESO	LDC collects from customers	Over collection	LDCs pay to IESO	LDC collects from customers	Over collection
A	100	0	100	\$82.20	\$82.20	\$0	\$72.61	\$72.61	\$0
B	100	10	90	\$73.98	\$82.20	\$8.22	\$72.61	\$72.61	\$0
C	100	25	75	\$61.65	\$82.20	\$20.55	\$72.61	\$72.61	\$0
Total	300 MWh	35 MWh	265 MWh	\$217.83	\$246.60	\$28.77	\$217.83	\$217.83	\$0

- Revenue neutral to LDCs and IESO
- No change in LDCs billing
- Proposal is a fairer method of allocation
 - All customers would pay the same rate regardless of the proportion of embedded generation within the service territory of their distributor
- Cost of facilitating the methodology change is negligible
 - LDCs already report embedded generation volumes to IESO for purposes of calculating Global Adjustment

2014-2016 IESO Business Plan

Presentation to Stakeholder Advisory Committee

Kim Warren, Ted Leonard and Terry Young
August 14, 2013



- IESO Board of Directors and Senior Management look to the Stakeholder Advisory Committee (SAC) members to provide input into the IESO's Business Planning process
- At the April 3 meeting, SAC members identified the priorities within their four sector constituencies
- Subsequent meetings were held among SAC members and Senior Management to discuss the priorities and develop the Business Plan
- August 14 meeting to seek high-level feedback from the SAC members on the IESO 2014-2016 Business Plan

- Improving price signals
- Reduce barriers for increased participation in electricity market
- Enhanced education, information and awareness
- Better align demand response and conservation demand management (CDM) programs with system needs
- Enhance inertia scheduling
- Clarify future steps of electricity market development
- Greater transparency in decision-making and actions taken at the IESO

- Maintain reliability
- Prepare for future operations
- Efficiently manage our business
- Effectively contribute to the development and implementation of government policy

Current and Expected Environment

- Increasing complexity, new North American reliability standards and significant transformation of Ontario's electricity system creating new challenges for IESO
- Coal phase out nearing completion, growing contribution from renewable, variable supply, surplus baseload generation conditions continuing
- Addressing cyber security
- Changing workforce demographics, aging IT systems

- Demand side looking to make increased contribution in Ontario similar to experiences in other markets/jurisdictions
- Growing recognition of potential of market based approaches to resource development/implementation
- Stakeholder input necessary to identify and implement new market measures
- IESO supporting increased number of government-led initiatives

- Electricity sector development plan
- Enabling platforms for demand and new technology
- Enhance relationships with consumers, stakeholders and government
- Investing in people
- Multi-year program to refresh or replace aging IT infrastructure
- Maintaining focus on excellence in reliable and efficient operations

Past initiatives have begun to deliver benefits:

- Energy Modelling – operability and energy issues
- IESO Simulator – Operator Training
- Renewable Integration Initiative – integration of renewables
- Rollout of on line limit capability to all Provincial zones

- **Bulk Electric System (BES) implementation** - An increased focus on compliance with BES standards— IESO and Market Participants - as the Bulk Electric System definition rolls out over the planning horizon
- **Network Modelling** - Increased effort on network modelling to support NERC requirements for wide area view
- **Surplus baseload generation (SBG)** - Dedicated management of SBG to provide more timely signals to the sector partners and market participants
- **IESO tool refresh** – IT systems in need of upgrade or replacement

- **Industry Development of a longer term plan of initiatives for the Ontario Marketplace**
 - Complete various market reviews – foundation for market/sector development plan
 - Seek alignment on the broader goals for improving the market place
 - Review potential changes to understand the merits of each and prioritize the initiatives over a 5-year time horizon
 - Establish and implement a longer term market development plan of initiatives for the Ontario electricity market

- **Increased integration of demand response into the wholesale market**
 - Approach demand response like any other resource in the marketplace
 - Continue to build relationships and understanding of various DR participants
 - Understand opportunities, challenges and barriers
 - Explore pilots or other mechanisms for development
 - Continue work with OPA to find ways to get better integration of existing DR3 contracts into the market
 - Initiate improvements in IESO market systems to allow for load aggregation to directly participate in the market

- **Enhancing Relationships with Customers and Stakeholders**
 - Stakeholder Summit will be an annual event to kick off advisory efforts for each year
 - Enhancements to education and stakeholder engagement processes to support expected increase in stakeholder engagement activities

- Workforce demographics require investment in training and development initiatives
- Promote increased energy awareness among the broader consumer base to facilitate the development of a more dynamic demand response capability
- Enable increased access to information and data through new IESO website

- In 2014 the IESO is proposing to change the charge determinant used in calculating its fee to include embedded generation within the distribution system
- New methodology more fairly reflects the changing nature of the grid
- 2014 energy volumes on a gross load basis, inclusive of embedded generation, are projected to be 157.6 TWh

- Effective cost management has been a key priority for the IESO since its inception in 1999 ... recognized need to effectively manage costs that are ultimately passed on to customers
- Proposed fee reflects that commitment
- IESO actions, while at a small cost to the IESO and ratepayers, can result in significant savings to customers across the sector

- Board of Directors to review draft Business Plan on September 6, 2013
- Submission to Minister of Energy by September 30, 2013
- Upon Ministerial approval, submit proposed revenue requirement and fee to the Ontario Energy Board

Appendix B

Response to Vecc 2b)

Filed: April 4, 2014

IESO Response Interrogatories

EB-2013-0381

Measures	2010		2011		2012		2013	
	Rating	Notes	Rating	Notes	Rating	Notes	Rating	Notes
A1.1 (unsupplied energy)	Exceeds	The IESO continued its high performance in maintaining the reliability of Ontario’s power system. Ontario's annual system unsupplied energy result in 2010 was 11.96 which is ‘below’ the published Ontario benchmark of 15.75 and represents the lowest level in 5 years. There were no red flagged local areas as of December 31st, and therefore, no mitigation plans were required. (target =	Exceeds	Annual system unsupplied energy result was 10.59 (target = 15.75)	Exceeds	Annual system unsupplied energy result was 11.46 (target = 15.75)	Below	Annual system unsupplied energy result was 18.65 (target = 15.75)
A2.1 (compliance and regulatory audits)	Meets	<p>The IESO reports full compliance with NERC high Violation Risk Factors (VRF) and no violations of NPCC sanctionable criteria that are greater than Level 2 as well as full compliance to all standards at the lower levels (target = 100%).</p> <p>98% of market participants self-reported to be fully compliant with high VRF and no violation of NPCC sanctionable criteria greater than Level 2 (target = 90%).</p> <p>The IESO was subject to a spot audit by NPCC against a number of NERC standards. The IESO was found to be fully compliant.</p>	Meets	<p>The IESO reported full compliance with all NERC high VRF requirements and NPCC sanctionable criteria (target = 100%).</p> <p>98% of market participants reported full compliance with NERC high VRF requirements and NPCC sanctionable criteria (target = 90%).</p> <p>The NPCC audits of the NERC requirements, reliability and Critical Infrastructure Protection (CIP), were conducted in June. The Audit Teams did not identify any violations of high VRF requirements and noted several areas of excellence in the audit reports.</p>	Meets	<p>IESO reported full compliance (target = 100%)</p> <p>NERC conducted a spot audit of 19 requirements (2 of which were high VRF). No findings or recommendations for improvement and the IESO received commendations for its culture of compliance.</p>	Meets	<p>IESO reported full compliance (target = 100%)</p> <p>The NPCC spot audits of NERC requirements resulted in zero violations, concerns and recommendations.</p>
B2.1 (customer satisfaction)	Meets	The IESO achieved an average rating of 7.6 (target = 7.5)	Meets	The IESO achieved an average rating of 7.5 (target = 7.5).	Meets	Achieved an average rating of 7.5 (target = 7.5)	Meets	Achieved an average rating of 7.5 (target = 7.5)
C1.1 (projects/change initiatives)	Meets	The key projects, as listed in the 2010-2012 Business Plan, were delivered on time and on budget or are still on track with the approved business case.	Meets	<p>All approved projects were initiated as proposed and were completed or were progressing according to requirements. As of December 2011, only one required project was on-going.</p> <p>By the end of 2011, a total of 43 projects had been ranked, 35% are in service, 44% have been initiated, 16% have not started and 5% were cancelled.</p>	Below	<p>Approved projects suffered from the merger-related human resource shortfalls. The biggest issue was the number of important application refreshes that ran late (11) or did not start (4)</p> <p>Although other approved projects were substituted, the full intent of the measure was not met.</p> <p>One optional project was late and 3 were not started.</p>	Meets	<p>Three approved projects were completed while a fourth project is progressing in accordance with plan. Significant emphasis was placed on refresh projects during the year. 17 projects were completed and a further 18 are underway. All projects scheduled to be starting in 2013 have done so.</p> <p>The Renewables Integration Initiative (RII), entered service as did 5 other optioanl projects and 3 are moving forward on track.</p> <p>All of the above completed projects were delivered within budget and met or exceeded their business</p>

Measures	2010		2011		2012		2013	
	Rating	Notes	Rating	Notes	Rating	Notes	Rating	Notes
C3.1 (budget performance)	Meets	IESO’s operating surplus for 2010 was \$18.3 million. This surplus can be attributed to effective cost management by the IESO including: o Operations Management and Administration savings of \$6.2 million. o Amortization savings of \$7.0 million, as a result of continued utilization/good maintenance of existing assets, resulting in extensions to asset service lives. In addition: o Increase of IESO revenues of \$4.3 million a result of higher exports.	Meets	IESO’s operating surplus for 2011 was \$6.0 million (exceeds target of \$2.5 million). This was achieved entirely through cost savings while revenue remained neutral.	Meets	Total costs for 2012 were \$11.7 million below the approved total cost envelope target of \$131.9 million, excluding any operating costs associated with the results of Market Forum.	Meets	The IESO’s total cost for 2013 was \$118.8 million, or \$9.0 million below the approved total cost envelope of \$127.8 million.
D1.1 (leadership)	Meets	The IESO is perceived as a leader by 48.4% of the surveyed customers. (target was 35%)	Meets	In the results from the 2011 IESO Customer Satisfaction Survey, 54% of respondents rated the IESO as a leader as compared to 48% in 2010 (target = 50%). Management maintained strong visibility in 2011 by speaking at a total of 70 engagements (target = 55).	Exceeds	Achieved 58% on leadership survey (target = 50%) Management spoke at 90 engagements (target = 55)	Meets	Achieved 56% on leadership survey (target = 50%) Management spoke at 140 engagements (target = 110)