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Ontario

NOTICE OF AMENDED PROPOSAL TO ISSUE A CODE

PROPOSED REVISED TRANSMISSION SYSTEM CODE

BOARD FILE NO.: RP-2004-0220

TO: All Participants in Proceeding RP-2004-0220
All Other Interested Parties

Background

By Notice of Proposal to Issue a Code dated December 17, 2004, the Ontario Energy Board (the "Board") proposed to issue a revised Transmission System Code (the "Revised Code") under section 70.2 of the *Ontario Energy Board Act, 1998*. Relative to the original version of the Transmission System Code issued by the Board on July 14, 2000 (the "July 2000 Code"), the Revised Code incorporates changes that were designed principally to implement the Board's June 8, 2004 decision in proceeding RP-2002-0120 (the "Phase One Decision"), which was initiated by the Board to conduct a broad-based review of the July 2000 Code. The Revised Code also incorporates changes designed to clarify and, in some cases, modify the rights and obligations of transmitters and customers alike.

The Board received 20 submissions on the Revised Code. The Board has considered the submissions received from parties on this matter and is now proposing amendments to the Revised Code.

The Board's Amended Proposal

The following is a synopsis of some of the more significant amendments to the Revised Code that are proposed by the Board. It is intended to provide only an overview of certain of the proposed amendments. All of the Board's proposed amendments to the Revised Code are included in the clean and comparison versions of the amended proposed Revised Code that are attached to this Notice of Amended Proposal.

The proposed amendments are designed to serve various purposes, including:

- addressing certain issues that arise as the result of the transition from the July 2000 Code to the Revised Code;

- enhancing the degree of symmetry between customer obligations and transmitter obligations;

- incorporating additional provisions arising out of the decision of the Board in proceeding RP-1999-0057/EB-2002-0501 (the joint application by Hydro One Networks Inc., Ontario Power Generation Inc. and Bruce Power L.P.);

- allowing additional flexibility in relation to the exercise of certain rights or the performance of certain obligations, while clarifying the scope of others; and

- minimizing the likelihood of disputes arising between a transmitter and its customers.

In addition, largely in response to comments received on the original version of the Revised Code, the Board is proposing amendments that address gaps, inadequacies or issues in relation to the Revised Code.

As a general rule, the Board is not proposing amendments to the technical provisions of the Revised Code (sections 8, 9 and 10 of the body of the Revised Code and Schedules A, E, F and G of both versions of Appendix 1 (the form of Connection Agreement)). By way of exception, amendments are being proposed:

- to sections 8.2.1 and 10.7 of the Revised Code for consistency with section 1.7 of Schedule G of both versions of Appendix 1; and

- to a limited number of the Schedules of both versions of Appendix 1 to incorporate additional provisions arising out of the decision of the Board in proceeding RP-1999-0057/EB-2002-0501.

The Board's intention remains to invite stakeholders to establish a working group to consider the need for, and where appropriate to recommend, changes to the technical provisions of the Revised Code.

The Board acknowledges the study filed by Hydro One Networks Inc. as part of its submissions on the Board's December 17, 2004 Notice of Proposal. That study contains a discussion of the potential rate implications of the Board's approach to the bypass of transformation facilities. The issue of bypass in relation to a customer's existing load was addressed in the Board's Phase One

Decision, where it was determined that such bypass should be permitted if compensation is paid based on the net book value of the bypassed assets. The Board remains of the view that this approach is appropriate and does not consider it necessary to revisit that approach at this time. To the extent that this approach may have an impact on pooled transformation rates, a transmission rate proceeding is the appropriate forum in which to address that impact.

The Board also anticipates that potential bypass situations will more often than not involve bypass by distributors. Where a distributor wishes to bypass a transmitter's existing transformation facility in favour of building its own, there is opportunity for the Board to assess the prudence of such bypass in terms of the overall economic efficiency to end-use customers.

Overview of Proposed Amendments

1. Transition to the Revised Code

(a) Application of Revised Code to Existing Customers

A number of comments received in relation to the original version of the Revised Code highlighted the need for additional clarity around the transition from the July 2000 Code to the Revised Code, and in particular the issue of the application of the revised versions of Appendix 1 to existing customers.

The Board is of the view that the preferred approach in this regard is for all transmitters and all customers to be subject to the same set of rules on a going-forward basis. In addition to promoting fairness across all customers, this approach will provide greater certainty to transmitters and customers alike as to the rules that will govern their relationship once the Revised Code has come into effect. However, the Board also believes that elements of existing agreements that have been freely negotiated between the parties should be preserved to the extent that they are not contrary to or inconsistent with the Revised Code.

Accordingly, the Board is proposing amendments to the Revised Code to clarify that, as of the date of coming into effect of the Revised Code (now defined in the Revised Code as the "Code revision date"), existing connection agreements will be deemed to be amended to conform to the applicable version of Appendix 1 of the Revised Code that results from this proceeding. Thus, as of the Code revision date the relationship between the parties will, with two exceptions, be governed on a going-forward basis by the applicable version of Appendix 1 of the Revised Code. The two exceptions are:

- provisions that have been freely negotiated between the parties and that are not contrary to or inconsistent with the Revised Code will remain in effect. It is also clarified that such provisions will not

be considered to be inconsistent with the Revised Code simply because the Revised Code is silent on the point; and

- provisions of existing connection agreements that relate to parallel provisions in the applicable version of Appendix 1 that are required to be completed by the parties will remain in effect.

Consistent with this approach, it is also confirmed that a provision in an agreement entered into before the Code revision date that requires the parties to realign their relationship in a manner consistent with the Revised Code remains valid.

The above approach is now embodied in sections 3.0.7 to 3.0.9 of the Revised Code. Similarly, the Board is proposing amendments to section 4.1.3 of the Revised Code to provide that, where a customer does not have an executed connection agreement, the parties will as of the Code revision date be bound by the applicable version of Appendix 1 of the Revised Code. It is the expectation of the Board that all future connections will be the subject of an executed connection agreement, and it is not intended that section 4.1.3 will apply to facilities that are connected after the Code revision date.

The Board is also proposing related amendments to section 3.0.6 of the Revised Code to clarify that the above approach is not intended to obligate a transmitter to conduct a new economic evaluation for existing customers. The amendments in this regard are expressed as being without prejudice to the resolution of any disputes in relation to existing economic evaluations. The Board's intention is, however, that the provisions of the Revised Code relating to contracted capacity and true-ups should apply to existing customers (determined on the basis of existing economic evaluations), and the Board is therefore proposing to amend section 6.5.3 accordingly by deleting the reference to June 8, 2004.

(b) Other

The Board recognizes that parties may need the benefit of time in order to arrange their affairs and adjust to certain requirements of the Revised Code. Accordingly, the Board is proposing to incorporate transitional provisions into the Revised Code as follows:

- proposed amendments to sections 4.5 and 6.1 that allow a transmitter a period of one year from the Code revision date to file its delivery point performance standards and its connection procedures for approval by the Board. It is anticipated that the one-year period will provide sufficient time for a transmitter to complete these documents and to obtain input from all interested stakeholders prior to submitting them to the Board. The proposed amendments include provisions that allow the Board to approve

incomplete performance standards or connection procedures pending filing of the completed documents, and to address the manner in which transmitters are to process requests for connection pending approval of their connection procedures; and

- proposed addition of a new section 14.3.1 to both versions of Appendix 1 of the Revised Code that acknowledge that time may be required for the parties to provide certain information to one another; and

- proposed amendments to section J.3.2 of the load version of Appendix 1 that defers implementation of the obligations in relation to annual reporting on load changes.

2. Symmetry Between Customer Obligations and Transmitter Obligations

The Board acknowledges that, in certain instances, a transmitter may have difficulty meeting its obligations under the Revised Code in the absence of corresponding or supporting customer obligations. The Board is therefore proposing amendments to both versions of Appendix 1 of the Revised Code to address this issue. These include proposed amendments to section 24.1 and Schedule I of both versions of Appendix 1. The Board is also proposing amendments to Schedule J of the load version of Appendix 1 to clarify or strengthen a load customer's obligations in relation to its load forecasts, and to require load customers to give the transmitter notice of their intention to bypass transmission facilities.

3. Incorporation of Additional Provisions from RP-1999-0057/EB-2002-0501

In the original version of the Revised Code, the Board incorporated a number of provisions arising out of the decision of the Board in proceeding RP-1999-0057/EB-2002-0501, with the effect of extending the application of these provisions to all customers. The Board is now proposing to amend the Revised Code to incorporate additional provisions arising out of that proceeding which relate to the technical provisions of the Revised Code. These include proposed amendments to Schedule A of the generator version of Appendix 1 and to Schedules F and G of both versions of Appendix 1. In addition, section 20.5.4 of the load version of Appendix 1 has been amended for consistency with the same section of the generator version of Appendix 1.

4. Other

The Board is proposing other amendments to the Revised Code to address gaps, inadequacies or issues identified in the comments received on the original Revised Code. These include amendments that:

- require a customer to demonstrate to the reasonable satisfaction of the transmitter that a reduction in load has resulted from renewable embedded generation, energy conservation, energy efficiency or load management activities. This is necessary in order to provide some objective basis upon which the transmitter can treat such reductions in load in the manner required by the Revised Code (sections 4.2.3, 6.5.10 and 11.2.3 and section J.2.4 of Schedule J of the load version of Appendix 1);

- clarify that facilities are required to meet not only the performance standards set out in Appendix 2 of the Revised Code but also the technical requirements of the Revised Code, recognizing that this has the effect of deeming facilities that were procured or ordered prior to May 1, 2002 to be compliant with both the basic general performance standards set out in Appendix 2 of the Revised Code and the other technical requirements of the Revised Code (sections 4.3.2, 4.6.1 and 4.6.2 and section 24.2 of both versions of Appendix 1);

- require a party that is responsible for the need to reschedule testing, commissioning or inspection activities to pay the reasonable costs incurred by the other party in relation to the rescheduling. The intent of this provision is to minimize the likelihood of disputes arising between the parties in relation to the scheduling of activities that a transmitter may attend at or participate in (sections 4.3.4 and 6.1.14 and sections 24.4, 24.6 and 28.2.2 of both versions of Appendix 1):

- require a transmitter to include timelines in its connection procedures (section 6.1.4);

- refine the rules relating to available capacity to minimize the ability of a customer to manipulate its load for assigned capacity purposes and to reduce a transmitter's obligations in relation to notice of expansion studies and the reconfiguration of load so that these obligations are more commercially reasonable (sections 6.2.2 and 6.2.15);

- refine the rules relating to cost responsibility for new and modified connections. In addition to clarifying the parameters of an economic evaluation, it is proposed to require a transmitter to give notice of its intention to apply to the Board for direction in relation to capital contributions for network facilities. It is also proposed to clarify that a transmitter may retain all or a part of a security deposit where the customer fails to connect its facilities to new or modified connection facilities constructed for that customer and to provide

additional flexibility in relation to the allocation of costs where the need for a new or modified facility is triggered by more than one customer (sections 6.3.1, 6.3.2, 6.3.5, 6.3.11, 6.3.14 and 6.3.15);

- limit the circumstances in which a transmitter is required to carry out a customer impact assessment to situations where a system impact assessment is required or where the transmitter determines that the connection may have an impact on existing customers connected to the applicable facility (section 6.4.3);

- provide a transmitter with additional flexibility in determining the financial risk associated with a proposed connection (section 6.5.2 and Appendix 4);

- refine the rules relating to contestability to clarify that design work is uncontestable if the connection facilities will be transferred to the transmitter and to stipulate that a customer that chooses to carry out contestable work must carry out all of that work (section 6.6.2);

- require a transmitter to give notice of a customer's decision to bypass the transmitter's facilities to all relevant connected customers (sections 6.7.11 and 11.2.2);

- grandfather existing agreements between neighbouring Ontario transmitters for a period of five years (section 6.8.2);

- clarify the role of the Board in relation to the resolution of connection-related disputes (section 12.1.4);

- reflect the commercial realities of project financing of customer facilities (sections 6.2, 19.4, 21.3 and Schedule C of both versions of Appendix 1);

- allow the parties additional flexibility in arranging work on facilities (sections 27.10.5 to 27.10.8 of both versions of Appendix 1);

- require that the parties bear their own costs and expenses associated with switching activities, noting that the approach that is now being proposed represents a departure from the treatment of this issue as set out in the Board's Phase One Decision (section 27.6.3 of both versions of Appendix 1); and

- make provision for additional options in relation to settlement for transmission service charges and the presentment of information (Schedules B and D of both versions of Appendix 1 and Schedule J of the load version of Appendix 1).

Anticipated Costs and Benefits

The purpose of the Revised Code remains the same under the amended proposal described in this Notice of Amended Proposal as it was under the original proposal issued on December 17, 2004. The principal purpose of the Revised Code therefore remains that of reflecting the Board's Phase One Decision.

The amendments now proposed by the Board are expected to provide additional certainty and clarity for transmitters and their customers in relation to the rules that will govern their relationship on a going-forward basis; to create enhanced symmetry in the rights and obligations of the parties; and to better reflect certain commercial and practical realities.

Thus, the amendments now proposed by the Board are anticipated to contribute in a positive way towards achieving the objectives of the Revised Code. As noted in the Board's December 17, 2004 Notice of Proposal, those objectives are:

- greater clarity and transparency in the relationship between transmitters and their customers;
- a uniform and consistent approach to customer processes;
- minimizing disincentives for new generation and energy conservation;
- greater accountability for transmitters and customers;
- a fairer allocation of costs; and
- improved transparency in relation to the exchange of information.

The Board believes that the following description of anticipated costs set out in the Board's December 17, 2004 Notice of Proposal remains applicable when considering the Revised Code in association with the amendments that are now being proposed:

> In clarifying and rationalizing the relationship between transmitters and their customers, the Revised Code includes new methods by which the financial and other obligations of the parties will be defined. In some instances, use of these methods may increase the costs incurred by, or decrease the revenues available to, transmitters. For example, the provisions of the Revised Code relating to bypass may have this effect. In other circumstances, customers may face higher costs or extended obligations. The Board anticipates, however, that ratepayers will achieve

an overall benefit from lower energy costs and more effective and efficient transmission systems. The Board also anticipates that parties will benefit from the clarifications that have been included in the Revised Code, which will allow parties to have a clearer understanding of their respective rights and obligations.

The Board remains of the view that the Revised Code, including the amendments proposed under this Notice of Amended Proposal, reflects an appropriate balancing of the interests of transmitters in relation to the management, operation and reliability of their transmission systems and the interests of customers in relation to the efficient use of electricity and of transmitter-owned resources. The Board also remains of the view that the anticipated benefits of the Revised Code outweigh any costs that might be incurred or borne.

Coming into Force

The Board is now proposing that the Revised Code come into effect on the date on which the Revised Code is published in the *Ontario Gazette*.

Invitation to Comment

All interested parties are invited to make written representations on the Board's amended proposal. The Board asks that any person wishing to provide written representations on the Board's amended proposal **confine their comments** to the amendments identified in the attached comparison version of the amended proposed Revised Code.

Any person who wishes to make a written representation with respect to the Board's amended proposal must file ten paper copies of the representation, and an electronic copy in both Adobe Acrobat (PDF) and Word, with the Board Secretary by **4:30 pm** on **June 16, 2005.** Electronic copies may be submitted on diskette or by e-mail to ***boardsec@oeb.gov.on.ca***. Your submission must quote file number **RP-2004-0220** and include your name, address, e-mail address and fax number.

The Board requests that the representation specifically reference the relevant sections of the amended proposed Revised Code.

Clean and comparison versions of the amended proposed Revised Code and all written representations received by the Board with respect to the amended proposed Revised Code will be available for public inspection on the Board's website at ***www.oeb.gov.on.ca*** and at the office of the Board during normal business hours.

If you have any questions regarding the Revised Code, please contact Gordon Ryckman by phone at (416) 440-8109 or toll free at 1-888-632-6273, or by e-mail at gordon.ryckman@oeb.gov.on.ca.

DATED at Toronto, June 2, 2005.

ONTARIO ENERGY BOARD

John Zych
Board Secretary

Attachments:

Amended Proposed Transmission System Code (clean version)

Amended Proposed Transmission System Code (comparison version showing changes against December 17, 2004 version)

Ontario Energy Board
Commission de l'Énergie de l'Ontario

ONTARIO ENERGY BOARD

Transmission System Code

Amended Proposal

June 2, 2005

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1. PURPOSE

1.0.1 The purpose of this Transmission System Code (the "Code") is to set out:

(a) the minimum conditions that a transmitter shall meet in designing, constructing, managing, maintaining and operating its transmission system;
(b) the rules governing a transmitter's obligation to connect customers to its transmission system, and to provide transmission service to its customers;
(c) the obligations between a transmitter and its customers and between a transmitter and its neighbouring Ontario transmitters;
(d) the rules governing the economic evaluation of transmission system connections and expansions;
(e) the minimum standards for facilities connected to a transmission system; and
(f) through the Connection Agreement, the obligations of a customer to the transmitter to whose transmission system the customer's facilities are connected.

2. DEFINITIONS

In this Code, unless the context otherwise requires:

2.0.1 "Act" means the *Ontario Energy Board Act, 1998*, S.O.1998, c.15, Schedule B, and includes all regulations made thereunder;

2.0.2 “assigned capacity” means, in relation to a load customer and a connection facility, the capacity determined in accordance with section 6.2.2;

2.0.3 “available capacity” means, at a given time, the capacity on a connection facility that is not at that time assigned to a load customer;

2.0.4 "Board" means the Ontario Energy Board;

2.0.5 "bus" means a common current carrying element which allows the connection of other elements to that common element;

2.0.6 "business day" means any day that is not a Saturday, a Sunday or a legal holiday in the Province of Ontario;

2.0.7 “CIA” means customer impact assessment;

2.0.8 “circuit breaker” means a system element that interrupts the flow of electricity upon receiving a trip signal and includes, where applicable, any associated current transformer and the bus section between the breaker bushing and its current transformer;

2.0.9 “Code revision date” means the date on which this Code comes into effect as specified in section 13.0.1;

2.0.10 "come into service" means, in relation to a facility, the time at which the facility becomes connected to a transmission system and energized following commissioning of the facility;

2.0.11 "connect" means to form a direct physical link between a transmitter's transmission facilities and a customer's facilities or a neighbouring Ontario transmitter's facilities;

2.0.12 "connection agreement" means an agreement entered into by a transmitter and a customer setting out terms and conditions pertaining to connection of the customer's facilities to the transmitter's transmission system and the provision of transmission services in relation to those customer facilities;

2.0.13 "connection facilities" means line connection facilities and transformation connection facilities that connect a transmitter's transmission system with the facilities of another person;

2.0.14 "connection point" means a point of connection between a transmitter's transmission facilities and a customer's facilities;

2.0.15 "connection service" in relation to a transmitter has the meaning given in the transmitter's Rate Order;

2.0.16 "consumer" means a person using, for their own consumption, electricity that they did not generate and whose facilities are connected to a transmission system;

2.0.17 "contracted capacity" means, in relation to a load customer and a connection facility, the capacity determined in accordance with section 6.2.3;

2.0.18 "customer" means a generator, consumer, distributor or unlicensed transmitter whose facilities are connected to or are intended to be connected to a transmission system;

2.0.19 "customer facilities" means any and all equipment, elements, and facilities of any kind whatsoever owned by a customer that are relevant to a connection;

2.0.20 "de-energized" means a state at which the stored potential energy of an isolated piece of equipment has been discharged. Electrical equipment is considered de-energized when its electrical energy has been discharged through connection to an effective ground potential. Mechanical equipment is considered de-energized when hazards due to temperature, pressure, chemical substances, gases, radiation, and motion have been minimized or, where practical, eliminated by measures including the following: (i) operation of valves, gates and dampers; (ii) opening of pipes or equipment to the atmosphere; (iii) purging, ventilating, or cooling; (iv) applying brakes and blocking motion; and (v) discharging loaded springs;

2.0.21 "delivery point" has the same meaning as "connection point";

2.0.22 "distribute" with respect to electricity means to convey electricity at voltages of 50 kV or less;

2.0.23 "distributor" means a person who owns or operates a distribution system;

2.0.24 "distribution system" means a system for distributing electricity, and includes any structures, equipment or other things used for that purpose;

2.0.25 "electricity" means electrical energy as measured in kilowatt hours;

2.0.26 "Electricity Act" means the *Electricity Act, 1998,* S.O.1998, c.15, Schedule A, and includes all regulations made thereunder;

2.0.27 "element" means any electrical device that has at least one terminal that is operated at greater than 50 kV and that may be connected to other electrical devices, and is usually associated with a generator, transformer, transmission circuit, circuit breaker, HVDC pole, series or shunt compensating device or bus section;

2.0.28 "emergency" means any abnormal condition that requires automatic or immediate manual action to prevent or limit loss of a licensed transmitter's transmission facilities or loss of the supply of electricity or energy that could adversely affect: (a) the reliability of the licensed transmitter's transmission system, (b) the integrity of customer facilities or of the licensed transmitter's transmission facilities, or (c) public safety, property or the environment;

2.0.29 "facilities" means transmission facilities, a neighbouring Ontario transmitter's facilities or customer facilities, as the context requires, and includes any structures, lines, transformers, breakers, disconnect switches, buses, voltage/current transformers, protection systems, telecommunications systems, cables and any other auxiliary equipment used for the purpose of conveying electricity;

2.0.30 "fault" means an event arising from the failure of facilities, including a short circuit, an open circuit, or an intermittent connection;

2.0.31 "forced outage" means the automatic or manual limitation of service owing to de-rating or limitation of facilities, or the unavailability of facilities as a result of actual or potential failure of those facilities or of any other facilities related to them;

2.0.32 "generator customer" means a customer who owns or operates a generation facility;

2.0.33 "good utility practice" means any of the practices, methods and acts engaged in or approved by a significant portion of the electrical utility industry in North America during the relevant time period, or any of the practices, methods and acts which, in the exercise

of reasonable judgment in light of the facts known at the time the decision was made, could have been expected to accomplish the desired result at a reasonable cost consistent with good business practices, reliability, safety and expedition. Good utility practice is not intended to be limited to optimum practices, methods or acts to the exclusion of all others, but rather to include all practices, methods or acts generally accepted in North America;

2.0.34 "harmonic" means a sinusoidal component of a periodic wave or quantity having a frequency that is an integral multiple of the fundamental frequency (for example, a component whose frequency is twice the fundamental frequency is called a second harmonic);

2.0.35 "IESO" means the Independent Electricity System Operator continued under the Electricity Act;

2.0.36 "isolate" means to separate facilities from any source of dynamic energy;

2.0.37 "isolating device" means a device used to separate facilities from any source of dynamic energy;

2.0.38 "licence" means a licence issued under Part V of the Act;

2.0.39 "line connection" means radial lines that do not, under normal operating conditions, connect network stations and whose sole purpose is to serve one or more persons;

2.0.40 “load customer” means a customer who owns or operates a facility other than a generation facility or a transmission system;

2.0.41 "load shedding" means the deliberate disconnection of the load of a customer from a transmission system or a distribution system (either manually or automatically) in response to an emergency in order to maintain the integrity of the transmission system or distribution system and to minimize overall outages to customer facilities;

2.0.42 "maintenance" includes such routine maintenance, troubleshooting, repairs, changes, modifications and other activities as may be required for the safe and efficient operation of facilities;

2.0.43 "Market Rules" means the rules made under section 32 of the Electricity Act;

2.0.44 “neighbouring Ontario transmitter” in relation to a licensed transmitter (the “first transmitter”) means another licensed transmitter whose transmission system is located in Ontario and is connected to that of the first transmitter or that seeks to have its

transmission system located in Ontario connected to that of the first transmitter, as the context requires;

2.0.45 "network facilities" means those facilities, other than connection facilities, that form part of a transmission system that are shared by all users, comprised of network stations and the transmission lines connecting them;

2.0.46 "NERC" means the North American Electric Reliability Council;

2.0.47 "net book value" means the net book value used by the Board for rate-making purposes;

2.0.48 "outage" means the removal of facilities from service, unavailability for connection of facilities, temporary de-rating, restriction of use or reduction in the performance of facilities for any reason, including to permit the inspection, testing, maintenance or repair of facilities;

2.0.49 "planned outage" means an outage that is planned or intentional and that is scheduled to occur at a pre-selected time, usually for the purpose of permitting construction, preventative maintenance or repair;

2.0.50 "promptly" means performed in a expeditious manner and without undue delay, using due diligence, and with the intent of completing a required act or task as quickly as practicable;

2.0.51 "protection system" means equipment that detects faults or abnormal conditions and takes appropriate corrective action to isolate the faulted element;

2.0.52 "protective relay" means an electrical device that detects a fault or abnormal condition on a transmission system or a distribution system and that is designed to respond to abnormal variations in input conditions and to cause prescribed contact operation or similar abrupt changes in associated electric control circuits which, in turn, if prescribed parameters are met, initiate the operation of a system element (such as a circuit breaker) to disconnect a faulty element (such as a transformer);

2.0.53 "Rate Order" means an order made by the Board under the Act, and in effect at the relevant time, that, among other things, establishes the rates that may be charged by a transmitter for transmission service;

2.0.54 "reliability", in relation to electricity service, means the ability to deliver electricity in accordance with all applicable reliability standards and in the amount desired;

2.0.55 "reliability organization" means NERC, NERC's reliability councils and the IESO;

2.0.56 "reliability standards" means the criteria, standards and requirements relating to reliability set forth in this Code and, where relevant, as established by applicable reliability organizations;

2.0.57 "renewable generation" means generation facilities that generate electricity using one or more of the following sources: wind, sun, biomass, bio-oil, biogas, landfill gas or water;

2.0.58 "single contingency" means a single event, usually involving the loss of one or more elements, that affects a transmission system at least momentarily;

2.0.59 "site" means the land, buildings and other structures on, in or around which facilities are located;

2.0.60 "transformation connection" means transformation facilities, tapped off a transmission system, that step down voltages from transmission levels to distribution levels (i.e. from more than 50 kV to 50 kV or less) in order to supply the facilities of a person;

2.0.61 "transmission facilities" means facilities owned by a transmitter that form part of or all the transmission system owned by that transmitter;

2.0.62 "transmission service" means a service provided by a transmitter to a customer as specified in the transmitter's Rate Order, and includes Network Service, Line Connection Service, Transformation Connection Service or such other transmission service as may be described in such Rate Order;

2.0.63 "transmission system" means a system for transmitting electricity and includes any structures, equipment or other things used for that purpose;

2.0.64 "transmit" with respect to electricity means to convey electricity at voltages of more than 50 kV;

2.0.65 "transmitter" means a person who owns or operates a transmission system;

2.0.66 "unlicensed transmitter" means a person who owns or operates a transmission system and that is exempt from the requirement to hold a licence under section 57(b) of the Act by virtue of a regulation made under the Act or of the application of section 84 of the Act; and

2.0.67 "work" includes design, installation, construction, commissioning, removal, inspection, testing, undertaking of repairs or undertaking of maintenance.

3. APPLICATION AND INTERPRETATION

3.0.1 All appendices attached to this Code form part of it. Unless otherwise defined in this Code, words and phrases shall have the meaning ascribed to them in the Act or the Electricity Act. Headings are for convenience only and shall not affect the interpretation of this Code. Words importing the singular include the plural and vice versa. Words importing a gender include any gender. Words importing a person include (i) an individual, (ii) a company, sole proprietorship, partnership, trust, joint venture, association, corporation or other private or public body corporate; and (iii) any government, government agency or body, regulatory agency or body or other body politic or collegiate. A reference to a person includes that person's successors and permitted assigns. A reference to a body, whether statutory or not, that ceases to exist or whose functions are transferred to another body is a reference to the body that replaces it or that substantially succeeds to its powers or functions. Where a word or phrase is defined in this Code, the Act or the Electricity Act, other parts of speech and grammatical forms of the word or phrase have a corresponding meaning. A reference to a document (including a statutory instrument) or a provision of a document includes any amendment or supplement to, or any replacement of, that document or that provision. The expression "including" means including without limitation.

3.0.2 A reference in this Code to"dedicated" connection facilities means that such facilities are constructed initially for the sole use of a single customer, but shall not be interpreted to mean that such facilities cannot thereafter be used by any other customer if they are owned by a licensed transmitter at the relevant time.

3.0.3 A reference in this Code to:

(a) "existing load" in relation to a load customer and a connection facility, shall at any point in time be equal to the customer's assigned capacity on that connection facility at that time; and

(b) "new load", in relation to a load customer and a connection facility, shall at any point in time:

i. if the customer has contracted capacity, be equal to the load that exceeds the customer's contracted capacity at that time; or

ii. in any other case, be equal to the load that exceeds the customer's existing load as determined under section 3.0.3(a).

3.0.4 Except when an emergency is anticipated or is occurring, if the time for doing any act or omitting to do any act under this Code expires on a day that is not a business day, the act may be done or may be omitted to be done on the next day that is a business day.

3.0.5 Except to the extent provided in a transmitter's licence, another code issued by the Board or an order of the Board, this Code applies to all licensed transmitters and to all transactions and interactions between a licensed transmitter and its customers and between a licensed transmitter and its neighbouring Ontario transmitters.

3.0.6 Subject to section 3.0.5, a transmitter shall not:

(a) enforce any provision of any agreement that is contrary to or inconsistent with this Code;

(b) apply any provision of any agreement in a manner that is contrary to or inconsistent with this Code; or

(c) require any person to enter into an agreement that contains a provision that is contrary to or inconsistent with this Code or to otherwise agree to terms and conditions that are contrary to or inconsistent with this Code.

This section 3.0.6 applies to an agreement regardless of whether the agreement was entered into before the Code revision date. Nothing in this section 3.0.6 shall affect the continued validity of a provision of any agreement entered into before the Code revision date under which the parties agreed to realign their relationship in a manner consistent with this Code. Nothing in this section 3.0.6 shall be construed as requiring a transmitter to conduct a new economic evaluation in relation to a new or modified connection if the transmitter carried out an economic evaluation prior to the Code revision date. Without prejudice to the resolution of any dispute between the parties regarding an economic evaluation that was carried out prior to the Code revision date, such economic evaluation shall for the purposes of the application of this Code be deemed to have been carried out under this Code and shall, together with the associated load forecast, apply for the purposes of this Code. For greater certainty, a provision in an agreement entered into before the Code revision date is not contrary to or inconsistent with this Code simply by reason of the fact that this Code does not expressly contemplate such provision or is silent

on the matter. Nothing in this section 3.0.6 shall affect the continued validity of a provision of any agreement entered into before the Code revision date under the parties agreed to realign their relationship in a manner consistent with this Code.

3.0.7 Subject to sections 3.0.5, 3.0.8 and 3.0.9, all connection agreements executed prior to the Code revision date in furtherance of the requirement set out in section 2.1.1 of the Transmission System Code as it existed prior to the Code revision date are, as of the Code revision date, deemed to be amended to conform to the applicable version of Appendix 1. The relationship between the parties shall thereafter be governed by the applicable version of Appendix 1.

3.0.8 Where a connection agreement entered into before the Code revision date contains provisions that were negotiated between the parties and that are not contrary to or inconsistent with this Code, those provisions shall remain in effect and must be honoured by the parties accordingly. For greater certainty, a provision in a connection agreement entered into before the Code revision date is not contrary to or inconsistent with this Code simply by reason of the fact that this Code does not expressly contemplate such provision or is silent on the matter.

3.0.9 Where the applicable version of Appendix 1 contemplates that the parties will complete certain portions of the connection agreement and the parties had completed the corresponding portions in a connection agreement that was executed prior to the Code revision date, those portions shall continue in effect unless and until amended by the parties.

3.0.10 To the extent of any inconsistency or conflict between them, a Rate Order and the Affiliate Relationships Code for Electricity Transmitters and Distributors prevail over this Code.

3.0.11 Any matter under this Code requiring a determination by the Board may be determined without a hearing or through an oral, written or electronic hearing, at the Board's discretion.

4. STANDARDS OF BUSINESS PRACTICE AND CONDUCT

4.1 GENERAL REQUIREMENTS

4.1.1 Subject to section 4.1.2, a transmitter shall connect a customer's facilities and shall offer and provide transmission services to a customer subject to that customer entering into or having a connection agreement with the transmitter. Such connection agreement shall be in the form set out in the applicable version of Appendix 1. Where the customer is an unlicensed transmitter, the version of Appendix 1 to be used shall be determined based on the nature of the facility that is connected to the unlicensed transmitter's transmission system. Where both a generation facility and a load facility are connected to the unlicensed transmitter's transmission system, this may require two connection agreements.

4.1.2 A transmitter may not enter into a connection agreement on terms and conditions other than those set forth in the applicable version of Appendix 1 or amend the terms and conditions of a connection agreement relative to the terms and conditions set forth in the applicable version of Appendix 1 except as expressly contemplated in the applicable version of Appendix 1 or with the prior approval of the Board.

4.1.3 Where a transmitter does not have a connection agreement with a customer whose facilities were connected to the transmitter's transmission system prior to the Code revision date, the transmitter shall be bound by the applicable version of Appendix 1 in relation to that customer and shall be permitted to consider that customer's continued acceptance of transmission service as acceptance by that customer of all of the terms and conditions of the connection agreement in the form set out in the applicable version of Appendix 1.

4.1.4 A transmitter shall ensure that all connections to its transmission system are made by it with due regard for the safety of the transmitter's employees and the public.

4.1.5 A transmitter shall provide customers and any neighbouring Ontario transmitter with all necessary information that is in the possession of or reasonably available to the transmitter to enable the transmitter to comply with its obligations under this Code, including the information specified in Appendix 3.

4.1.6 Except as may be required by section 4.1.1 in relation to a customer that is an unlicensed transmitter, a transmitter may not require more than one connection agreement from a customer whose facilities will be or are connected either at a single site or at multiple sites or service territories that are geographically contiguous. A transmitter shall require a separate connection agreement for each facility that a customer may have at geographically noncontiguous sites or service territories.

4.2 TRANSMISSION SERVICE CHARGES

4.2.1 A transmitter shall maintain and make available to all customers a list of its transmission services and the rates or charges approved by the Board for those transmission services.

4.2.2 No transmitter shall charge a customer for any transmission service unless the charge has been approved by the Board.

4.2.3. A transmitter shall not charge a customer for any transmission services in relation to any reduction in that customer's load that the customer has demonstrated to the reasonable satisfaction of the transmitter (such as by means of an energy study or audit) has resulted from renewable embedded generation (determined in accordance with section 11.1), energy conservation, energy efficiency or load management activities, except in accordance with the transmitter's Rate Order.

4.2.4 A transmitter shall not impose or enforce a minimum payment obligation on any customer, except in accordance with this Code or a Rate Order.

4.3 FACILITIES STANDARDS

4.3.1 A transmitter shall ensure that its transmission facilities:

(a) meet all applicable requirements of the Ontario Electrical Safety Authority;

(b) conform to applicable industry standards, including those of the Canadian Standards Association, the Institute of Electrical and Electronic Engineers, the American National Standards Institute, and the International Electrotechnical Commission;

(c) are designed and constructed in accordance with the instruments and standards referred to in section 5.1.2; and

(d) comply with the basic general performance standards and technical requirements for facilities that are set out in this Code, including Appendix 2.

4.3.2 The basic general performance standards and minimum technical requirements for facilities, except facilities deemed compliant under section 4.6.1, are set out in this Code, including Appendix 2. A transmitter shall provide the appropriate technical parameters to assist a customer in designing its facilities so that they are compliant with those basic general performance standards.

4.3.3 A transmitter may participate in the commissioning, inspecting, and testing of customer-owned connection facilities to ensure that facilities connected to its transmission system will not materially reduce or adversely affect the reliability of its transmission system. The transmitter shall recover its reasonable costs of participating in the commissioning, inspection or testing of the customer-owned connection facilities from the customer.

4.3.4 Where section 4.3.3 applies, the commissioning, inspection or testing of the customer's facilities shall be conducted at a time that is mutually agreed by the customer and the transmitter. If the commissioning, inspection or testing is required to be rescheduled at the request of the transmitter or by reason of the transmitter's failure to attend, the transmitter shall pay all reasonable costs incurred by the customer in respect of the rescheduling of the commissioning, inspection or testing activity. If the commissioning, inspection or testing is required to be rescheduled at the request of the customer or by reason of the customer's failure to attend, the transmitter may recover from the customer the reasonable costs incurred by the transmitter in respect of the rescheduling of the commissioning, inspection or testing activity.

4.4 OPERATIONAL STANDARDS AND REPORTING PROTOCOL

4.4.1 A transmitter shall take reasonable steps to ensure that all facilities connected to its transmission system are operated and maintained in accordance with the requirements of this Code and all connection agreements.

4.4.2 Upon request by a customer or a neighbouring Ontario transmitter, a transmitter shall provide the fault levels at all relevant connection points.

4.4.3 A transmitter shall promptly report to a customer or a neighbouring Ontario transmitter any changes in the transmitter's transmission facilities, or in the facilities of another customer or neighbouring Ontario transmitter if known, that could materially affect the transmission services provided to that customer or neighbouring Ontario transmitter.

4.5 PERFORMANCE STANDARDS

4.5.1 A transmitter shall develop performance standards that apply at the customer delivery point level and that:

(a) reflect typical transmission system configurations that take into account the historical development of the transmitter's transmission system at the customer delivery point level;

(b) reflect historical performance at the customer delivery point level;

(c) are, where applicable, consistent with the comparable performance standards applicable to all delivery points throughout the transmitter's transmission system;

(d) establish acceptable bands of performance at the customer delivery point level for transmission system configurations, geographic area, load, and capacity levels;

(e) establish appropriate triggering events to be used to initiate technical and economic evaluations by the transmitter and its customers regarding performance standards at the customer delivery point level, as well as the circumstances in which any such triggering event will not require the initiation of a technical or economic evaluation;

(f) establish the steps to be taken based on the results of any evaluation that has been so triggered, as well as the circumstances in which such steps need not be taken; and

(g) establish any circumstances in which the performance standards will not apply.

4.5.2 A transmitter shall file the performance standards referred to in section 4.5.1 for the Board's approval within one year of the date of Code revision date. A transmitter shall also file any material amendments to those performance standards for the Board's approval. The transmitter may not give effect to such performance standards or any material amendments thereto until the performance standards or amendments have been approved by the Board or amended by the Board under section 4.5.3.

4.5.3 The Board may, on application or on its own motion, amend a transmitter's performance standards and any amendments thereto that have previously been approved by the Board under section 4.5.2 or 4.5.4 or amended by the Board under this section 4.5.3.

4.5.4 Where, prior to the Code revision date, a transmitter had filed its performance standards with the Board and such performance standards do not contain all of the material required by section 4.5.1, the transmitter shall file the missing material within one year of the Code

revision date. The Board may approve the incomplete performance standards pending the filing of the missing material.

4.5.5 A transmitter shall publish on its website its Board-approved performance standards referred to in section 4.5.1, and shall make those performance standards available upon request.

4.5.6 A transmitter's performance standards that were approved by the Board, in whole or in part, prior to the Code revision date shall be deemed to have been approved by the Board under this section 4.5.

4.6 COMPLIANCE OF FACILITIES WITH STANDARDS

4.6.1 All facilities that came into service, were procured or were ordered prior to May 1, 2002 are deemed to be in compliance with the performance standards and technical requirements contained in this Code, including Appendix 2.

4.6.2 A transmitter may require that customer facilities that have been deemed compliant under section 4.6.1 be brought into actual compliance with the performance standards or technical requirements set out in this Code, including Appendix 2, within a specified time period where the transmitter has identified that:

(a) there is a material deterioration in the reliability of its transmission system resulting from the performance of the deemed compliant facilities;

(b) there are material negative impacts on another customer's or on a neighbouring Ontario transmitter's power quality resulting from the performance of the deemed compliant facilities; or

(c) there is a material increase in capacity or load at the site where the deemed compliant facilities are located.

4.6.3. A transmitter may not act in accordance with section 4.6.2 until the transmitter has developed rules and procedures for requiring customer facilities to be brought into actual compliance and those rules and procedures have been approved by the Board. A transmitter may not give effect to a material amendment to such rules and procedures until the amendment has been approved by the Board or made by the Board under section 4.6.4.

4.6.4. The Board may, on application or on its own motion, amend a transmitter's rules and procedures and any amendments thereto that have been previously approved by the Board under section 4.6.3 or amended by the Board under this section 4.6.4.

4.6.5 If a transmitter's transmission facilities that have been deemed compliant under section 4.6.1 are considered by the transmitter or a customer to be causing any of the effects referred to in sections 4.6.2(a) to 4.6.2(c), the transmitter shall bring those transmission facilities into actual compliance.

4.6.6 A transmitter shall publish on its website its Board-approved rules and procedures referred to in section 4.6.3, and shall make those rules and procedures available upon request.

4.6.7 A transmitter's rules and procedures referred to in section 4.6.3 that were approved by the Board, in whole or in part, prior to the Code revision date shall be deemed to have been approved by the Board under this section 4.6.

4.7 CONFIDENTIALITY

4.7.1 Subject to section 4.7.2, a transmitter shall not, in performing its obligations or exercising its rights under this Code or under any of the transmitter's procedures referred to in this Code, disclose confidential information relating to a customer or a neighbouring Ontario transmitter to another person without the consent of the customer or neighbouring Ontario transmitter to whom the confidential information relates. Where such consent cannot be obtained, the transmitter may request guidance from the Board.

4.7.2 Nothing in section 4.7.1 shall prevent the disclosure of confidential information by a transmitter:

(a) where required under this Code, the Market Rules or the transmitter's licence;

(b) where required by law or regulatory requirements;

(c) where required by order of a government, government agency or regulatory body or agency having jurisdiction;

(d) if required in connection with legal proceedings, arbitration or any expert determination relating to the subject matter of this Code, or for the purpose of advising the transmitter in relation thereto;

(e) as may be required to enable the transmitter to fulfill its obligations to any reliability organization;

(f) where permitted by the applicable connection agreement or the applicable agreement referred to in section 6.8.1; or

(g) as may be required in an emergency or to prevent an emergency.

5. REQUIREMENTS FOR OPERATIONS AND MAINTENANCE

5.1 DAY-TO-DAY OPERATIONS

5.1.1. A transmitter shall ensure that the operation and maintenance of its transmission facilities are performed only by persons qualified to do so.

5.1.2. A transmitter shall operate and maintain its transmission facilities in compliance with this Code, its licence, its operating agreement with the IESO, the Market Rules, all connection agreements, good utility practice, the standards of all applicable reliability organizations and any applicable law.

5.2 FORCED OUTAGES

5.2.1 When a forced outage of a transmitter's transmission facilities adversely affects any customer facilities, the transmitter shall follow the procedures set out in the relevant sections of the applicable connection agreement.

5.2.2 When a forced outage of a transmitter's transmission facilities adversely affects the facilities of a neighbouring Ontario transmitter, the transmitter shall follow the procedures set out in the relevant sections of the applicable agreement referred to in section 6.8.1.

5.3 SCHEDULING OF PLANNED WORK

5.3.1 A transmitter shall follow the procedures for the scheduling of planned work which are set out in its connection agreements and in any agreements referred to in section 6.8.1.

5.3.2 A transmitter shall coordinate outages arising from planned work scheduled by a customer or a neighbouring Ontario transmitter that directly affect the transmitter's transmission facilities.

5.3.3 A transmitter shall, to the best of its ability, obtain from its customers and from any neighbouring Ontario transmitters their anticipated planned outages for the upcoming year by October 1st of each year.

5.4 EMERGENCY OPERATIONS

5.4.1. During an emergency or in order to prevent or minimize the effects of an emergency, a transmitter may take whatever immediate action it deems necessary to ensure public safety or to safeguard life, property or the environment without first notifying any other person. Without limiting the generality of the foregoing, during an emergency or in order to prevent or minimize the effects of an emergency a transmitter may:

(a) order the switching of equipment;

(b) disconnect the facilities of a customer or of a neighbouring Ontario transmitter; or

(c) require that a customer or a neighbouring Ontario transmitter disconnect its facilities,

in accordance with the applicable connection agreement or agreement referred to in section 6.8.1, as the case may be.

5.4.2 A transmitter that takes action under section 5.4.1 shall promptly report the action taken and the reason for it to all affected customers and neighbouring Ontario transmitters.

5.4.3 A transmitter shall implement load shedding as directed by the IESO and as specified in its connection agreements.

5.4.4 During an emergency or in order to prevent or minimize the effects of an emergency, a transmitter may interrupt supply to a customer or a neighbouring Ontario transmitter to protect the stability, reliability, or integrity of the transmitter's transmission facilities, or to maintain the availability of its transmission facilities. The transmitter shall advise all affected customers and neighbouring Ontario transmitters as soon as possible of the transmitter's transmission system's emergency status and of when to expect the resumption of normal operations and the reconnection of their facilities to the transmission system.

5.4.5 When a transmitter's transmission facilities return to normal operation following an emergency, the transmitter shall notify each affected customer and neighbouring Ontario transmitter as soon as possible that it may reconnect its facilities.

6. CUSTOMER CONNECTIONS

6.1 GENERAL REQUIREMENTS

6.1.1 A transmitter shall design and construct its new or modified connection facilities on a timely basis and in accordance with the connection procedures referred to in section 6.1.3 and all applicable standards and instruments referred to in section 5.1.2.

6.1.2 A transmitter shall ensure that new or modified connections to its transmission system:

(a) do not materially reduce the reliability or performance of its transmission system; and

(b) are constructed with such mitigation measures as may be required so that no new available fault current level referred to in section 6.4.4 exceeds the maximum allowable fault levels set out in Appendix 2 if this would have an adverse effect on any person or would result in a customer incurring additional costs to upgrade its facilities unless appropriate arrangements have been made as contemplated in section 6.4.4.

6.1.3 A transmitter shall publish on its website its Board-approved connection procedures for processing requests to connect to its transmission system or to modify existing connections, and shall make those connection procedures available upon request. A transmitter's connection procedures shall be consistent with this Code and shall be consistent with and complementary to the Market Rules and the IESO's market procedures as they relate to connection.

6.1.4 A transmitter's connection procedures referred to in section 6.1.3 shall include the following:

(a) a procedure for determining the total normal supply capacity of a connection facility as required by section 6.2.7;

(b) an available capacity procedure that complies with section 6.2.11;

(c) a security deposit procedure that complies with section 6.3.11;

(d) a customer impact assessment procedure that complies with section 6.4.1;

(e) an economic evaluation procedure that complies with section 6.5.2;

(f) a contestability procedure that complies with section 6.6.2;

(g) a reconnection procedure that complies with section 6.10.3;

(h) a dispute resolution procedure that complies with section 12.1.1;

(i) an obligation on the transmitter to provide a customer with the most recent version of the plans required by section 6.3.6 that cover the applicable portion of its transmission system;

(j) a schedule of all charges and fees that may be charged by the transmitter and that are not covered by the transmitter's Rate Order; and

(k) reasonable timelines within which activities covered by the procedures referred to in paragraphs (a) to (g) and (i) must be completed by the transmitter or the customer, as applicable, including typical construction times for facilities.

6.1.5 A transmitter shall file its connection procedures for the Board's approval within one year of the Code revision date. A transmitter shall also file any material amendments to those procedures for the Board's approval. The transmitter may not give effect to such connection procedures or any material amendments thereto until the connection procedures or amendments have been approved by the Board or amended by the Board under section 6.1.6.

6.1.6 The Board may, on application or on its own motion, amend a transmitter's connection procedures and any amendments thereto that have been previously approved by the Board under section 6.1.5 or 6.1.7 or amended by the Board under this section 6.1.6.

6.1.7 Where, prior to the Code revision date, a transmitter had filed its connection procedures with the Board and such connection procedures do not contain all of the material required

by section 6.1.4, the transmitter shall file the missing material within one year of the Code revision date. The Board may approve the incomplete connection procedures pending the filing of the missing material.

6.1.8 Until such time as a transmitter's connection procedures have been approved by the Board, the transmitter shall process requests for connection and deal with the other matters listed in section 6.1.4 in accordance with all applicable provisions of this Code and otherwise in a manner that is reasonable and consistent with this Code, the Act, the Electricity Act and its licence. A dispute between a transmitter and a customer that arises in relation to any matter listed in section 6.1.4 prior to the approval by the Board of the transmitter's connection procedures may be submitted to the Board for determination where either the transmitter or the customer allege that the other is seeking to impose a term or condition that is inconsistent with or contrary to the Act, the Electricity Act, the transmitter's licence or this Code.

6.1.9 A transmitter's connection procedures shall not unjustly discriminate among customers or unduly restrict the ability of any person to connect its facilities to the transmitter's transmission system.

6.1.10 A transmitter shall not connect a customer's facilities or any new, modified or replacement customer facilities unless any required connection authorization, certificate of inspection or other applicable approval has been issued or given by the Ontario Electrical Safety Authority in relation to such facilities.

6.1.11 A transmitter may require, as a condition of connecting a customer's facilities or any new, modified or replacement customer facilities, that the customer provide it with the same technical information provided to the IESO during any connection assessment and facility registration process associated with the customer's facilities or any new, modified or replacement customer facilities. The transmitter shall require that such information be provided in the form outlined in the applicable sections of the IESO's public website.

6.1.12 A transmitter may require, as a condition of connecting a customer's facilities or any new, modified or replacement customer facilities, that the customer provide it with test certificates certifying that the customer's facilities have passed all relevant tests and comply with all applicable instruments and standards referred to in section 5.1.2, including any certificates of inspection that may be required by the Ontario Electrical Safety Authority.

6.1.13 A transmitter shall provide to a customer such technical parameters as may be required to assist the customer in ensuring that the design of the customer's facilities or of any new, modified or replacement customer facilities is consistent with the requirements applicable to the transmitter's transmission system.

6.1.14 A transmitter shall cooperate with a customer to ensure that modeling data that may be required for the planning, design and operation of connections are complete and accurate. The transmitter shall conduct, or may require that the customer conduct, such tests as may be required where the transmitter believes on reasonable grounds that the accuracy of such data is in question. Where the tests are conducted by the transmitter:

(a) the transmitter may require that the customer reimburse the transmitter for the costs and expenses reasonably incurred by the transmitter in conducting the tests;

(b) the tests shall be conducted at a time that is mutually agreed by the customer and the transmitter; and

(c) the transmitter shall promptly report the results of such tests to the customer.

If a test is required to be rescheduled at the request of the transmitter or by reason of the transmitter's failure to attend, the transmitter shall pay all reasonable costs incurred by the customer in respect of the rescheduling of the test. If a test is required to be rescheduled at the request of the customer or by reason of the customer's failure to attend, the transmitter may recover from the customer all reasonable costs incurred by the transmitter in respect of the rescheduling of the test.

6.2 AVAILABLE CAPACITY

6.2.1 A transmitter shall not assign available capacity on network facilities. A transmitter shall not assign available capacity for back-up purposes.

6.2.2 A load customer's assigned capacity in relation to a connection facility shall be equal to the aggregate of:

(a) the customer's highest rolling three-month average peak load under normal operating conditions:

i. in the most recent five years, where the determination of the customer's assigned capacity is made after May 1, 2007, or

ii. since May 1, 2002, where the determination of the customer's assigned capacity is made before on or before May 1, 2007; and

(b) any available capacity that has been assigned to the customer and that has not yet been taken up by the customer nor cancelled by the transmitter under section 6.2.19.

If a load customer's facility has been connected to the connection facility for a period of less than five years, for purposes of determining the customer's assigned capacity the

transmitter shall use the customer's highest rolling three-month average peak load in the year or years during which the customer's facility has been connected to the connection facility. Where a transmitter reasonably believes that a customer is manipulating its load for the purpose of the determination of its assigned capacity, the transmitter may request that the Board review and re-determine that assigned capacity.

6.2.3 Where an economic evaluation, including an economic evaluation referred to in section 6.2.24, 6.3.9 or 6.3.17, was conducted by a transmitter for a load customer in relation to a connection facility on the basis of a load forecast, that customer's contracted capacity shall, during the economic evaluation period to which the economic evaluation relates, be equal to the load identified in that load forecast or in any subsequent forecast used for purposes of giving effect to the true-up provisions of section 6.5.

6.2.4 A load customer with contracted capacity on a connection facility shall, in any year, be entitled to capacity in an amount that is equal to:

(a) the amount of capacity for that year as specified in the applicable load forecast referred to in section 6.2.3; or

(b) the customer's assigned capacity for that year,

whichever is greater.

6.2.5 Notwithstanding any assignments of available capacity that a transmitter may make under this section 6.2, the transmitter shall ensure that there is sufficient available capacity on the transmitter's connection facility to satisfy :

(a) the capacity entitlement of each load customer on that connection facility, determined in accordance with section 6.2.4; and

(b) the assigned capacity and the contracted capacity of all load customers in relation to that connection facility at the relevant time.

The transmitter shall conduct an expansion study where the transmitter considers it necessary to ensure that it can meet this obligation.

6.2.6 A transmitter shall from time to time as required determine the total assigned capacity on a connection facility. For that purpose, the total assigned capacity shall be the aggregate of the assigned capacity of each load customer whose facilities are then served by the connection facility. In making this determination, the transmitter shall take into account the normal size and shape of the load of each load customer served by the connection facility, excluding anomalous situations such as reconfigurations that may be required by the IESO, temporary load transfers, or emergencies.

6.2.7 A transmitter shall from time to time as required determine the available capacity on a connection facility. For that purpose, the available capacity shall be determined by subtracting the total assigned capacity on that connection facility, determined in accordance with section 6.2.6, from the total normal supply capacity for that connection facility. The transmitter shall establish in its connection procedures referred to in section 6.1.4 and implement a procedure to determine the total normal supply capacity of a transformation connection facility and a line connection facility.

6.2.8 Where a load customer requests an assignment of capacity on a connection facility, the transmitter shall determine the available capacity of that connection facility.

6.2.9 A transmitter shall from time to time as required monitor the available capacity on its connection facilities.

6.2.10 Subject to section 6.2.12(e), a transmitter shall assign available capacity on a connection facility to load customers on a first-come first-served basis. A transmitter shall not assign capacity to a load customer unless the customer has demonstrated its need for available capacity in accordance with the requirements of the transmitter's available capacity procedure referred to in section 6.2.12(d). This obligation shall apply whether or not implementation of the available capacity procedure is required by section 6.2.11.

6.2.11 A transmitter shall establish an available capacity procedure in its connection procedures referred to in section 6.1.4. The transmitter shall implement the available capacity procedure when:

(a) the available capacity on a connection facility is reduced to 25% or less of the total normal supply capacity of that connection facility; or

(b) a load customer requests supply capacity on a connection facility that would reduce the available capacity on that connection facility to 25% or less of the total normal supply capacity of that connection facility.

6.2.12 The available capacity procedure referred to in section 6.2.11 shall include provisions that:

(a) specify how load customers will be notified that implementation of the available capacity procedure has been triggered as required by section 6.2.11;

(b) set out how load customers may apply for available capacity in relation to the applicable connection facility;

(c) establish a reasonable amount of time for a load customer to make such an application;

(d) set out how a load customer demonstrates its need for available capacity on the applicable connection facility;

(e) where there is more than one application for available capacity on the applicable connection facility based on demonstrated need, establish that available capacity will be assigned to the relevant load customers in proportion to their respective needs; and

(f) establish the circumstances under which an expansion study will be carried out.

6.2.13 Where a transmitter assigns capacity on a connection facility to itself (in its capacity as a customer) or to a load customer that is an affiliate of the transmitter, the transmitter shall give notice of such assignment to all other customers served by that connection facility regardless of whether such assignment triggers implementation of the available capacity procedure under section 6.2.11.

6.2.14 When a transmitter proposes to carry out an expansion study under section 6.2.5 or 6.2.12(f) in relation to the provision of new supply capacity by means of an increase in the capacity of an existing connection facility or the construction of a new connection facility, the transmitter shall notify all load customers served or that the transmitter then knows are expected to be served by the existing or the proposed new connection facility. The transmitter shall also post on its website a notice of its proposal to carry out such an expansion study and of the right of load customers served by existing adjacent connection facilities to apply to reconfigure their respective load as described in section 6.2.15.

6.2.15 Where a new connection facility is proposed under section 6.2.14, the transmitter shall use best efforts to notify all load customers served by existing connection facilities adjacent to the proposed new connection facility. Such notice shall advise each load customer that it may apply to the transmitter to reconfigure load representing its assigned capacity or its contracted capacity to the proposed new connection facility. Where a load customer makes such an application, the transmitter shall negotiate in good faith with the customer to determine the terms and conditions that will govern the reconfiguration. Where the transmitter receives applications from load customers in circumstances where the applications cannot all be accommodated by the transmitter, the transmitter shall nonetheless negotiate in good faith with all such customers to determine the terms and conditions that will govern the reconfiguration, and shall then reconfigure the load of each load customer with whom it has successfully negotiated such terms and conditions in proportion to its assigned capacity or contracted capacity.

6.2.16 Upon completion of an expansion study, the transmitter shall advise all affected load customers of the available capacity on all relevant existing and new connection facilities before and after the expansion.

6.2.17 Where available capacity is assigned to a load customer in relation to a connection facility and the customer has a connection agreement, the contracted capacity and load shape shall be specified in the connection agreement.

6.2.18. Available capacity that has been assigned to a load customer in relation to a connection facility may not, without the consent of the customer, be reassigned by a transmitter nor be reassigned by the customer except in connection with a change in ownership of the facility to which the assigned capacity relates. A transmitter shall, upon request, reassign assigned capacity as required to reflect such change in ownership.

6.2.19 Subject to section 6.2.20, where available capacity on a connection facility has been assigned to a load customer by a transmitter, and that capacity has not been taken up by the customer within one year of the assignment (except where that capacity is included in a load forecast referred to in section 6.2.3), the transmitter shall:

(a) cancel the assignment;

(b) treat such capacity as available capacity; and

(c) notify all other load customers whose facilities are served by that connection facility of the cancellation of the assignment.

The one-year period continues to run regardless of any change in the ownership of the facility to which the assigned capacity relates or of any reassignment of the assigned capacity as a result of that change in ownership.

6.2.20 A load customer may request that the transmitter extend the one-year period referred to in section 6.2.19 where circumstances warrant, such as where the customer is constructing new facilities that require more than one year to come into service. A transmitter shall not unreasonably deny such a request. Where the transmitter denies such a request, the customer may apply to the Board for an order requiring the transmitter to extend the one-year period.

6.2.21 Where a transmitter extends the one-year period referred to in section 6.2.19 in relation to itself (in its capacity as a customer) or a load customer that is an affiliate of the transmitter, the transmitter shall give notice of such extension to all other load customers served by that connection facility.

6.2.22 Upon request, a transmitter shall assign available capacity on a transmitter-owned connection facility to serve an existing load customer's new load unless the transmitter can demonstrate that the available capacity will not meet the customer's needs.

6.2.23 When a load customer provides its own connection facility to serve new load, the transmitter shall not assign capacity on the relevant transmitter-owned connection facility to that customer in relation to that new load.

6.2.24 Where a customer has made a capital contribution for the construction of a connection facility, and where that capital contribution includes the cost of capacity on the connection facility not needed by the customer, the transmitter shall provide a refund, calculated in accordance with section 6.2.25, to the customer if that capacity is assigned to another load customer within five years of the date on which the connection facility comes into service. Where such a refund is required under section 6.2.25, the transmitter shall require a financial contribution, calculated in accordance with section 6.2.25, from the subsequent customer.

6.2.25 For purposes of sections 6.2.24 and 6.3.17, the transmitter shall determine the amount of the refund to the initial customer and of the financial contribution from the subsequent customer by calculating a revised capital contribution amount using the prescribed economic evaluation methodology set out in section 6.5 and the same inputs as used in the original economic evaluation except for load, which will be based on the actual load of the initial customer up to the time of connection of the subsequent customer and a revised load forecast for the remainder of the economic evaluation period. The revised load forecast will include an updated load forecast of the initial customer plus the load forecast of the subsequent customer. The transmitter will then use the methodology set out in section 6.3.14, 6.3.15 or 6.3.16 to allocate the revised capital contribution amount to the initial and subsequent customers. The refund to the initial customer shall be determined by subtracting the initial customer's allocated share of the revised capital contribution amount from the original capital contribution amount paid by the initial customer.

6.2.26 Subject to section 6.2.27, a transmitter shall advise a load customer of the available capacity on a specific connection facility, upon request.

6.2.27 Without limiting the generality of section 4.7.1, in providing information with respect to available capacity to any person, a transmitter shall protect confidential information about any customer. Subject to section 6.2.16, before disclosing the available capacity on a connection facility that serves only one customer, the transmitter shall obtain the consent of that customer. Where such consent cannot be obtained, the transmitter may request guidance from the Board.

6.3 COST RESPONSIBILITY FOR NEW AND MODIFIED CONNECTIONS

6.3.1. Where a load customer elects to be served by transmitter-owned connection facilities, a transmitter shall require a capital contribution from the load customer to cover the cost of a connection facility required to meet the load customer's needs. A capital contribution may only be required to the extent that the cost of the connection facility is not recoverable in connection rate revenues. To that end, the transmitter shall include in the economic

evaluation the relevant annual connection rate revenues over the applicable economic evaluation period that are derived from that part of the customer's new load that exceeds the total normal operating capacity of any connection facility already serving the customer and that will be served by the new connection facility. The transmitter shall calculate any capital contribution to be made by the load customer using the economic evaluation methodology set out in section 6.5.

6.3.2 Where a transmitter has to modify a transmitter-owned connection facility to meet a load customer's needs, the transmitter shall require the load customer to make a capital contribution to cover the cost of the modification. A capital contribution may only be required to the extent that the cost of the modification to the connection facility is not recoverable in connection rate revenues. To that end, the transmitter shall include in the economic evaluation the relevant annual connection rate revenues over the applicable economic evaluation period that are derived from that part of the customer's new load that exceeds the total normal operating capacity of any connection facility already serving the customer and that will be served by the modified connection facility. The transmitter shall calculate any capital contribution to be made by the load customer using the economic evaluation methodology set out in section 6.5.

6.3.3 Except where a transmitter has to modify a transmitter-owned connection facility to meet a generator customer's needs, the transmitter shall require a generator customer to provide its own dedicated connection facilities and any equipment for monitoring and testing that is required by the transmitter to be installed on the customer side of the connection with the transmitter's transmission system.

6.3.4 Where a transmitter has to modify a transmitter-owned connection facility to meet a generator customer's needs, the transmitter shall require the generator customer to make a capital contribution to cover the cost of the modification, calculated in accordance with the economic evaluation methodology set out in section 6.5.

6.3.5 A transmitter shall not require any customer to make a capital contribution for modifications to the transmitter's network facilities that may be required to accommodate a new or modified connection. If exceptional circumstances exist so as to reasonably require a customer to make a capital contribution for network modifications, the transmitter or any other interested person may apply to the Board for direction. A transmitter:

(a) shall notify the customer as soon as possible of the transmitter's intention to apply to the Board for direction under this section 6.3.5; and

(b) shall not refuse to commence and diligently pursue construction of modifications to its network facilities pending direction from the Board under this section 6.3.5 provided that the customer has provided a security deposit to the transmitter in accordance with section 6.3.10.

6.3.6 A transmitter shall develop and maintain plans to meet load growth and maintain the reliability and integrity of its transmission system. The transmitter shall not require a customer to make a capital contribution for a connection facility that was otherwise planned by the transmitter, except for advancement costs.

6.3.7 A transmitter shall provide connection facilities that have a capacity sufficient to meet the needs of the applicable customer, subject to facilities standards and good utility practice.

6.3.8 A transmitter shall not require a customer to make a capital contribution for capacity added to a connection facility in anticipation of future load growth not attributable to that customer.

6.3.9 Where a transmitter is, at the time at which it is constructing a connection facility for a customer, aware of another future customer that will need capacity within five years of the construction of the connection facility, the transmitter shall add that capacity to the connection facility at the time of construction, provided that it obtains a security deposit in a form referred to in section 6.3.11 from that future customer to cover the cost of that additional capacity. The amount of the capital contribution to be obtained from the current customer and the amount or value of the security deposit to be collected from the future customer shall be determined using the economic evaluation methodology set out in section 6.5, the load forecasts of both customers and the methodology for attributing that capital contribution as described in section 6.3.14, 6.3.15 or 6.3.16. At the time of connection of the future customer's facilities, the transmitter shall where required redo the original economic evaluation using the same inputs except for any revised load forecast provided by the future customer. This will determine the amount of capital contribution to be collected from the future customer. Where the security deposit is in the form of cash, the transmitter shall return the security deposit to the future customer at the time of connection of its facilities to the connection facility, together with interest at the rate referred to in section 6.3.11, less the amount of the future customer's capital contribution. Where the security deposit is in a form other than cash, the transmitter shall return the security deposit to the future customer upon receipt of the customer's capital contribution.

6.3.10 Where a transmitter needs to construct new or modified network or connection facilities as a result of a connection application from a customer, the transmitter may require a reasonable security deposit in a form referred to in section 6.3.11 from the customer, taking into account the size of the new load or generator output, as the case may be. Where the security deposit is in the form of cash, the transmitter shall return the security deposit to the customer, together with interest at the rate referred to in section 6.3.11, less the amount of any capital contribution owed by the customer, once the customer's facilities are connected to the transmitter's transmission facilities. Where the security deposit is in a form other than cash, the transmitter shall return the security deposit to the customer once the customer's facilities are connected to the transmitter's transmission facilities and any capital contribution has been paid.

6.3.11 A transmitter shall establish a security deposit procedure in its connection procedures referred to in section 6.1.4. The security deposit procedure shall include the following:

(a) provisions that allow a customer to provide the security deposit in the form of cash, letter of credit or surety bond, as may be selected by the customer, or such other form as the customer and the transmitter may agree;

(b) provisions stipulating that any interest to be paid by the transmitter upon returning a security deposit that is in the form of cash shall be paid at the following rates:

i. for the period between the date on which the security deposit was provided by the customer and the date on which the security deposit is required to be returned by the transmitter, at the average over the period of the prime lending rate set by the Bank of Canada less two percent; and

ii. for the period after the date on which the security deposit is required to be returned by the transmitter, at the prime lending rate set by the Bank of Canada plus two percent; and

(c) a description of the circumstances under which the transmitter may keep all or part of a security deposit. A transmitter shall be entitled to keep all or a part of a security deposit that has been given in relation to the construction or modification of connection or network facilities where the customer subsequently fails to connect its facilities to the transmitter's new or modified facilities. A transmitter shall not otherwise retain a security deposit given in relation to the construction or modification of network facilities unless the Board has first determined that those facilities are stranded under section 6.3.5.

6.3.12 For a single generator customer, a transmitter shall attribute to that generator customer the cost of any required modification to a transmitter-owned connection facility required to serve the rated peak output of the generation facilities.

6.3.13 For a single load customer, a transmitter shall attribute to that load customer the cost of any new transmitter-owned connection facility or any modification to such connection facility required to serve that part of the customer's new load that exceeds the total normal operating capacity of any connection facility already serving that customer, as reasonably projected by the load forecast provided by the load customer or by such modified load forecast as may be agreed by the load customer and the transmitter.

6.3.14 Where more than one generator customer triggers the need for a modification to a transmitter-owned connection facility, a transmitter shall attribute the cost of the modification to those generator customers:

(a) in proportion to the rated peak output of their respective generation facilities; or

(b) in accordance with such other methodology as may be agreed between the transmitter and all such generator customers.

In the case of line connection facilities, the transmitter must also consider the relative length of line used by each generator customer when attributing the cost to those generator customers.

6.3.15. Where more than one load customer triggers the need for a new or modified transmitter-owned connection facility, a transmitter shall attribute the cost to those load customers:

(a) in proportion to their respective noncoincident incremental peak load requirements, as reasonably projected by the load forecasts provided by each such load customer or by such modified load forecast as may be agreed by such load customer and the transmitter; or

(b) in accordance with such other methodology as may be agreed between the transmitter and all such load customers.

In the case of line connection facilities, the transmitter must also consider the relative length of line used by each load customer when attributing the cost to those load customers.

6.3.16 For a new or modified transmitter-owned connection facility that will serve a mix of load customers and generator customers, a transmitter shall attribute the cost of the new connection facility or modification to the customers that cause the net incremental coincident peak flow on the connection facility that triggered the need for the new or modified connection facility. If and to the extent that the net incremental coincident peak flow is triggered by one or more load customers, the transmitter shall attribute the cost to each of those triggering load customers in the manner set out in section 6.3.15. If and to the extent that the net incremental coincident peak flow was triggered by one or more generator customers, the transmitter shall attribute the cost to each of those triggering generator customers in the manner set out in section 6.3.14. The transmitter shall also consider the relative length of line used by each load customer and each generator customer when attributing the cost of a new connection facility or modification to those customers.

6.3.17 Where a customer has made a capital contribution for the construction of a connection facility, and where that capital contribution includes the cost of capacity on the connection facility in excess of the customer's needs in order to comply with facilities standards or good utility practice, the transmitter shall provide a refund, calculated in accordance with section 6.2.25, to the customer if that available capacity is assigned to another customer within five years of the date on which the connection facility comes into service. The transmitter shall require a financial contribution from the subsequent customer to cover the amount of that refund.

6.4 CUSTOMER IMPACT ASSESSMENTS

6.4.1 A transmitter shall establish in its connection procedures referred to in section 6.1.4 a customer impact assessment ("CIA") procedure to be used to assess the impact of proposed new or modified connections on existing customers. The transmitter shall use best efforts to coordinate its customer impact assessment procedure with the Market Rules and the IESO's market procedures as they relate to connection assessments and approvals.

6.4.2 A CIA shall indicate existing available fault current levels and any change in those levels expected to be caused by a proposed new or modified connection, for each affected customer.

6.4.3 A transmitter shall carry out a CIA for any proposed new or modified connection where:

(a) the connection is one for which the IESO's connection assessment and approval process requires a system impact assessment; or

(b) the transmitter determines that the connection may have an impact on existing customers.

Where the transmitter decides not to carry out a CIA for any proposed new connection or modification that is not subject to the a system impact assessment, the transmitter shall notify existing customers in the vicinity, advising them of the proposed new connection or modification and of the transmitter's decision not to carry out a CIA on the basis that no customer impact is expected.

6.4.4 A transmitter shall use the results of a CIA to provide each customer affected by a proposed new or modified connection with a new available fault current level in order to allow each customer to take, at its own expense, action to upgrade its facilities as may be required to accommodate the new available fault current level up to the maximum allowable fault levels set out in Appendix 2. Where the new available fault current level would exceed the maximum allowable fault levels set out in Appendix 2, the transmitter may make financial arrangements with the customer under which the transmitter will pay the incremental costs of upgrading the customer's facilities to accommodate the new available fault current level.

6.4.5 A transmitter shall provide a copy of a CIA to each customer whose facilities are located in the study area used for conducting the CIA and to the Ontario Electrical Safety Authority. A transmitter shall also provide a copy of a CIA to the IESO where the proposed new or modified connection that is the subject of the CIA was the subject of a system impact assessment by the IESO.

6.5 ECONOMIC EVALUATION OF NEW AND MODIFIED CONNECTIONS

Generator customers

6.5.1 Where a transmitter modifies a transmitter-owned connection facility to meet the needs of a generator customer, the transmitter shall require the generator customer to pay the fully allocated cost of the minimum design required to meet the customer's needs. The transmitter shall include the capital cost of equipment installed on transmitter-owned connection facilities by the transmitter for monitoring the performance of the generation facility and for verification testing of fault protection equipment associated with the generation facility. If the generator customer elects to have verification testing costs included in the economic evaluation rather than paying such costs on an "as incurred" basis over time, the transmitter shall also include the present value of the estimated cost of doing periodic verification testing of its monitoring and testing equipment and, if necessary, of similar equipment owned by the generator customer.

Load customers

6.5.2 A transmitter shall establish in its connection procedures referred to in section 6.1.4 and implement an economic evaluation procedure that sets out how the transmitter will carry out an economic evaluation of a proposed new or modified connection of a load customer to determine what capital contribution is to be made by the load customer. The economic evaluation procedure shall:

(a) include the methodology that will be used by the transmitter in determining the financial risk associated with a proposed connection of a load customer, which methodology shall meet the requirements of and be consistent with Appendix 4;

(b) provide that the economic evaluation period will be 5 years for a high risk connection, 10 years for a medium-high risk connection, 15 years for a medium-low risk connection, and 25 years for a low risk connection;

(c) be based on the discounted cash flow calculation set out in Appendix 5 using the forecast connection rate revenues from the connection facilities and the fully allocated capital cost, operating and maintenance cost and administrative cost of the minimum design required to meet the customer's needs. The costs shall include the transmitter's cost of transmitter-owned equipment for monitoring and testing installed on connection facilities on either side of the connection point, and the cost of carrying out verification testing on that equipment;

(d) establish that the cost used in the economic evaluation is limited to the advancement costs where the transmitter had planned a new or modified connection facility and moves the planned date forward to accommodate a customer;

(e) use a discount rate that is based on the transmitter's current deemed debt-to-equity ratio, debt and preference share costs and Board-approved rate of return on equity;

(f) require that discounting reflect the true timing of expenditures so that up-front capital expenditures are treated as occurring at the beginning of the first year of operation, and future capital expenditures, annual connection rate revenues and average operation and maintenance costs will be treated as occurring at the mid-point of the year in which they occur;

(g) take into account all relevant tax amounts, adjusted by any applicable capital cost allowance;

(h) exclude network facility costs and network rate revenues;

(i) exclude historic revenues and sunk costs;

(j) establish that the relevant connection rate revenues shall be the revenue derived from that part of the load customer's new load that exceeds the total normal operating capacity of any connection facility already serving that customer and which will be served by a new or modified connection facility;

(k) require that the customer provide its load shape in such form and detail as the transmitter may reasonably require; and

(l) provide for separate economic evaluations for transformation connection facilities and line connection facilities.

The economic evaluation procedure may permit an initial calculation of a customer's capital contribution based on estimated costs, provided that where this occurs the transmitter must subsequently recalculate the customer's capital contribution in accordance with paragraph (c) based on actual costs as soon as these are known, and obtain from or credit the customer for any difference between the two calculations. Such recalculated capital contribution shall thereafter be used as the customer's capital contribution for all purposes under this Code.

Economic evaluation true-up calculations for load customers

6.5.3 For new or modified connection facilities, a transmitter shall carry out a true-up calculation, based on actual customer load, at the following true-up points:

(a) for high risk connections, at the end of each year of operation, for five years;

(b) for medium-high risk and medium-low risk connections, at the end of each of the third, fifth and tenth year of operation; and

(c) for low risk connections, at the end of each of the fifth and tenth year of operation, and at the end of the fifteenth year of operation if actual load is 20 percent higher or lower than the initial load forecast at the end of the tenth year of operation.

6.5.4 Subject to sections 6.5.8, 6.5.9 and 6.5.10, for the true-up calculation, a transmitter shall use the same methodology used to carry out the initial economic evaluation, and the same inputs except for load, which will be based on the actual load up to the true-up point and an updated load forecast for the remainder of the economic evaluation period used.

6.5.5 Subject to sections 6.5.8, 6.5.9 and 6.5.10, before carrying out a true-up calculation for a load customer who did not make an initial capital contribution, a transmitter shall adjust the initial load forecast used in the initial economic evaluation to the point where the present value of connection rate revenues equals the present value of costs.

6.5.6 Where a true-up calculation shows that a load customer's actual load and updated load forecast is lower than the load in the initial load forecast, and does not generate the initial forecast connection rate revenues, a transmitter shall require the load customer to make a payment to make up the shortfall, adjusted appropriately to reflect the time value of money.

6.5.7 Where a true-up calculation shows that a load customer's actual load and updated load forecast is higher than the load in the initial load forecast, and generates more than the initial forecast connection rate revenues, the transmitter shall post the excess revenue as a credit to the customer in a notional account. The transmitter shall apply this credit against any shortfall in subsequent true-up calculations. The transmitter shall rebate to the load customer any credit balance that remains when the last true-up calculation is carried out, adjusted appropriately to reflect the time value of money. The rebate shall not exceed any capital contribution, adjusted to reflect the time value of money, previously paid by the load customer.

6.5.8 When carrying out a true-up calculation for a distributor, a transmitter:

(a) shall add to the actual load the amount of any embedded generation (determined in accordance with section 11.1) that was installed during the true-up period; and

(b) shall not reduce the updated load forecast as a result of any embedded generation (determined in accordance with section 11.1) that was installed during the true-up period.

6.5.9. When carrying out a true-up calculation for a load customer other than a distributor, a transmitter:

(a) shall add to the actual load the amount of any embedded generation (determined in accordance with section 11.1) of 1 MW or less per unit, or any embedded renewable generation of 2 MW or less per unit, that was installed during the true-up period; and

(b) shall not reduce the updated load forecast as a result of any embedded generation (determined in accordance with section 11.1) of 1MW or less per unit, or any embedded renewable generation of 2 MW or less per unit, that was installed during the true-up period.

6.5.10 When carrying out a true-up calculation for any load customer, a transmitter:

(a) shall add to the actual load the amount of any reduction in the customer's load that the customer has demonstrated to the reasonable satisfaction of the transmitter (such as by means of an energy study or audit) has resulted from energy conservation, energy efficiency, load management or renewable energy activities that occurred during the true-up period; and

(b) shall not reduce the updated load forecast as a result of any reduction in the customer's load that the customer has demonstrated to the reasonable satisfaction of the transmitter (such as by means of an energy study or audit) has resulted from energy conservation, energy efficiency, load management or renewable energy activities that occurred during the true-up period.

6.5.11 Where a load customer voluntarily and permanently disconnects its facilities from a transmitter's facilities prior to the last true-up point referred to in section 6.5.3, the transmitter shall at the time of disconnection carry out a final true-up calculation in accordance with the rules set out in sections 6.5.4, 6.5.5, 6.5.8 and 6.5.9. Where the true-up calculation shows that the load customer's load to the date of disconnection has not generated the initial forecast connection rate revenues, the transmitter shall require the load customer to make a payment to make up the shortfall, adjusted appropriately to reflect the time value of money. Where a true-up calculation shows that the load customer's load to the date of disconnection has generated more than the initial forecast connection rate revenues, the transmitter shall rebate to the load customer any excess, adjusted appropriately to reflect the time value of money. The rebate shall not exceed any capital contribution, adjusted to reflect the time value of money, previously paid by the load customer.

6.6 CONTESTABILITY

6.6.1 Where a load customer requires new connection facilities, a transmitter shall allow the load customer to elect either to provide its own connection facilities or to require the transmitter to provide them. Where the load customer elects to require the transmitter to provide the connection facilities, the transmitter shall also allow the load customer to elect to have any associated contestable construction or design work (as identified in the transmitter's contestability procedure referred to in section 6.6.2) carried out by a party other than the transmitter.

6.6.2 A transmitter shall establish in its connection procedures referred to in section 6.1.4 and implement a contestability procedure. The contestability procedure shall establish:

(a) what work can be done by the transmitter only, on its own existing facilities, including conceptual design (uncontestable work), and what other connection facility construction and design work may, at a load customer's option, be done by either the transmitter or the load customer (contestable work), provided that if the load customer intends or is required to transfer any connection facilities that it constructs to the transmitter, all design work shall be uncontestable;

(b) the obligation of the transmitter to provide, at no cost:

i. a description of the contestable work and uncontestable work;

ii. a description of the labour and materials for each of the contestable work and the uncontestable work;

iii. an estimate of the capital cost for each of the contestable work and the uncontestable work, broken down into labour (including design, engineering and construction), materials, equipment, direct overhead (including administration) and indirect overhead costs, together with an indication of the degree of accuracy of that estimate;

iv. the calculation used to determine any capital contribution to be paid by the load customer if the transmitter constructs the connection facilities, even if no capital contribution is required. This calculation must include all of the assumptions and inputs used to produce the economic evaluation as described in 6.5, including the manner in which the customer's risk classification has been determined under Appendix 4; and

v. the information set out in Appendix 3, and the technical standards and specifications applicable to the contestable work, in sufficient detail to allow the load customer to design and construct connection facilities that

will meet the requirements applicable to the transmitter's transmission system;

and to provide, at cost, any revisions to this information required due to changes in the load customer's plans or in the transmitter's capital cost estimate;

(c) the right of a load customer to choose to carry out the contestable work or to require the transmitter to do it, provided that where the load customer chooses to carry out the contestable work, it must carry out all of the contestable work;

(d) where a load customer elects to carry out contestable work, the obligation of the load customer to complete that contestable work in accordance with the transmitter's conceptual design and technical standards and specifications and to pay any Board-approved fees for inspection, testing and commissioning by the transmitter;

(e) the right of a load customer to transfer any dedicated connection facilities it constructs to the transmitter and the obligation of a load customer to transfer non-dedicated connection facilities that it constructs to the transmitter;

(f) where a load customer proposes or is obliged to transfer any connection facilities it constructs to the transmitter, the obligation of the transmitter to provide, upon request and at cost, engineering design in sufficient detail to allow the load customer to carry out the contestable work and meet the specific connection facility design and performance requirements of the transmitter;

(g) the obligation of the transmitter to pay a transfer price that is the lower of the cost to the load customer or the transmitter's reasonable cost to do the same work, for any connection facility a load customer constructs and opts or is required to transfer to the transmitter; and

(h) where the transmitter pays a transfer price for a connection facility constructed by a load customer, the obligation of the transmitter to make any adjustment required to reflect that transfer price in any capital contribution that is to be paid by the load customer.

6.6.3 A transmitter shall provide a copy of its contestability procedure to any load customer requiring new connection facilities.

6.7 REPLACEMENT, RELOCATION AND BYPASS OF EXISTING FACILITIES

6.7.1 A transmitter shall notify each customer that will be affected by the transmitter's plans to retire a connection facility, at least five years in advance of the effective date of the retirement. The transmitter shall give each affected customer the option of:

(a) providing its own replacement connection facility;

(b) connecting its facilities to the connection facility of another person; or

(c) requiring the transmitter to provide a replacement connection facility.

6.7.2 Where a transmitter's connection facility is retired, the transmitter shall not recover a capital contribution from a customer to replace that connection facility.

6.7.3 Where a customer requests the relocation of a transmitter's connection or network facility, the transmitter shall recover from that customer the cost of relocating that connection or network facility.

6.7.4 Where a transmitter's connection or network facility is relocated in the absence of a customer request, the transmitter shall bear the cost of relocating that connection or network facility.

6.7.5 When a load customer provides its own connection facility to serve new load or transfers new load to the connection facility of another person, the transmitter shall not require bypass compensation from that customer.

6.7.6 Subject to sections 6.7.2, 6.7.7 and 6.7.8, for all or a portion of existing load a load customer may bypass a transmitter-owned connection facility with its own connection facility or the connection facility of another person, provided that the load customer compensates the transmitter.

6.7.7 For the purposes of sections 6.7.6 and 11.2.1, the transmitter shall calculate bypass compensation by first multiplying the net book value of the bypassed connection facility, including a salvage credit and reasonable removal and environmental remediation costs, if applicable, by the bypassed capacity on the relevant connection facility. The transmitter shall then divide the resulting figure by the total normal supply capacity of the bypassed connection facility. For purposes of this calculation:

(a) the bypassed capacity on the relevant connection facility shall be equal to the difference between the customer's existing load on that connection facility at the time of bypass and the customer's average monthly peak load in the three-month period following the date on which bypass occurred; and

(b) the normal supply capacity of the bypassed connection facility shall be determined by the transmitter in accordance with the Board-approved procedure referred to in section 6.2.7.

6.7.8 Where an economic evaluation, including an economic evaluation referred to in section 6.2.24, 6.3.9 or 6.3.17, was conducted by a transmitter for a load customer in relation to a connection facility on the basis of a load forecast, a transmitter shall not, during the economic evaluation period to which the economic evaluation relates, require bypass compensation from a customer under section 6.7.6 in relation to any load that represents that customer's contracted capacity.

6.7.9 A transmitter should avoid overloading a connection facility above its total normal supply capacity. Where a connection facility has been overloaded, and a customer transfers the overload to its own connection facility or to the connection facility of another person, the transmitter shall not require bypass compensation from that customer.

6.7.10 A transmitter shall promptly notify the Board upon becoming aware that a load customer that is a distributor intends to bypass a transmitter-owned connection facility with its own connection facility or the connection facility of another person.

6.7.11 Where a transmitter becomes aware that a load customer intends to bypass a transmitter-owned connection facility with its own connection facility or the connection facility of another person, the transmitter shall promptly notify all other load customers served by the connection facility that is intended to be bypassed.

6.8 OBLIGATIONS BETWEEN NEIGHOURING ONTARIO TRANSMITTERS

6.8.1 A transmitter shall enter into an agreement with each neighbouring Ontario transmitter. The agreement shall describe the facilities connecting the two transmission systems and shall set out the respective obligations of the parties in relation to:

(a) transmission system expansion and associated cost responsibilities;

(b) operational requirements and authorities;

(c) protections;

(d) emergency preparedness and emergency operations;

(e) outage co-ordination;

(f) forced outages;

(j) new or modified transmission facilities;

(h) the information to be exchanged between the parties;

(i) the protection of confidential information; and

(j) a dispute resolution process that provides for the fair, timely and effective resolution of disputes and that sets out specific timelines for completion of the dispute resolution process.

6.8.2 An agreement referred to in section 6.8.1 shall contain such other provisions as may be required to enable a transmitter to comply with its obligations under this Code relative to neighbouring Ontario transmitters and to the reliability and integrity of its transmission system.

6.8.3 Where a transmitter had an executed agreement with a neighbouring Ontario transmitter on the Code revision date, the parties shall amend that agreement as may be required to ensure that it complies with the requirements of sections 6.8.1 and 6.8.2. Such amendment shall be made as soon as any other amendment to the agreement is being made by the parties and in any event no later than the date that is five years from the Code revision date.

6.9 RECORD KEEPING AND REPORTING REQUIREMENTS

6.9.1 A transmitter shall maintain complete and accurate records of all economic evaluations required to be carried out under this Code, including the economic evaluations referred to in sections 6.2.24, 6.3.9 and 6.3.17. Each record must show the details of the economic evaluation, including the determination of the risk classification and the resulting economic evaluation period, the load forecast, the project capital costs, the ongoing operation and maintenance costs, and the project after tax incremental cost of capital, and must include the justification for all of the study parameters.

6.9.2 A transmitter shall file the records referred to in section 6.9.1 with the Board on request.

6.10 RECONNECTION

6.10.1 A transmitter shall investigate and determine the cause of any reported shutdown of a customer's facilities, regardless of the reason for that shutdown, using available evidence including input from the customer's staff. The transmitter shall upon request provide the customer with the results of its investigation.

6.10.2 Once a transmitter is satisfied that reconnection of a customer's facilities will not cause any adverse effects on the transmitter's transmission system, it shall as soon as practicable advise the customer when reconnection can take place. Reconnection to the transmitter's transmission facilities shall not take place until authorized by the transmitter.

6.10.3 A transmitter shall establish a reconnection procedure in its connection procedures referred to in section 6.1.4 setting out the steps to be taken by the transmitter when a customer whose facilities have been disconnected asks to be reconnected. The procedure shall also provide for notice to be given to the customer, setting out all steps to be taken by the customer and the transmitter, any system studies that will be carried out by the transmitter, any cost to be borne by the customer, and the duration of the reconnection process.

6.10.4 A transmitter shall not carry out a system study in relation to a proposed reconnection unless it can demonstrate that the system study is necessary to ensure system integrity or is required by the IESO.

7. COMPLIANCE, INSPECTION, TESTING AND MONITORING

7.1 REQUIREMENTS

7.1.1 A transmitter shall inspect, test and monitor its transmission facilities to ensure continued compliance with all applicable standards and instruments referred to in section 5.1.2.

7.1.2 A transmitter shall maintain complete and accurate records of the results of all performance inspecting, testing and monitoring that it conducts in fulfilment of its obligations under this Code. The transmitter shall keep these records for a minimum of seven years or for such shorter time as the Board may permit, and shall make them available to the Board on request.

8. GENERAL TECHNICAL REQUIREMENTS

8.1 GUIDELINES OF RELIABILITY ORGANIZATIONS

8.1.1 A transmitter shall ensure compliance with the standards of all applicable reliability organizations.

8.1.2 A transmitter shall provide to a customer, upon request, the name and address of a contact person for each applicable reliability organization.

8.2 PROTECTION AND CONTROL

8.2.1 A transmitter shall install and maintain protection systems that are capable of minimizing the severity and extent of disturbances to the transmission system while themselves experiencing a first-order single contingency such as the failure of a relay protection system to operate or the failure of a breaker to trip. In particular:

(a) the facilities designated by the transmitter or the IESO as essential to system reliability and security shall be protected by two protection systems. Each system shall be independently capable of detecting and isolating all faults on those facilities. Those facilities shall also have breaker failure protection, but breaker failure protection need not be duplicated. Both protection systems shall initiate breaker failure protection;

(b) to reduce the risk of both protection systems being disabled simultaneously by a single contingency, the two protection systems shall not use common components;

(c) the use of two identical protection systems should be avoided to reduce the risk of simultaneous failure of both systems due to design deficiencies or facilities problems;

(d) the protection systems shall be designed to isolate only the faulted facilities. For faults outside the protected zone, each protection system shall be designed either not to operate or to operate selectively in coordination with other protection systems;

(e) protection settings at tapped transformer stations owned by the transmitter, for protection of system elements affected by conditions on the transmission system, shall be coordinated with other system elements of the transmission system;

(f) protection systems shall not operate to trip for stable power swings following contingencies that are judged by protection system designers as not harmful to the transmission system or its customers;

(g) the components and software used in all protection systems shall be of proven quality for effective utility application and follow good utility practice;

(h) critical features associated with the operability of protection systems and the high voltage interrupting device (HVI) shall be annunciated or monitored;

(i) the design of protection systems shall facilitate periodic testing and maintenance. Test facilities and procedures shall not compromise the independence of the redundant protection systems. Test switches shall be used to eliminate the need to disconnect wires during testing;

(j) the two protection systems shall be supplied from separate secondary windings on one voltage transformer or potential device and from separate current transformer secondary windings (using two current transformers - one current transformer for each protection system); and

(k) protection system circuitry and physical arrangements shall be designed to minimize the possibility of incorrect operations from personnel error.

8.2.2 A transmitter shall follow the specific protection and control practices and facilities requirements which are set out in Schedule G of the applicable version of Appendix 1.

8.2.3 A transmitter should apply protection systems using the typical tripping matrix for transmission system protection shown in Exhibit E.2, Schedule E of the applicable version of Appendix 1.

8.3 INSULATION COORDINATION

8.3.1 A transmitter shall ensure that its facilities are protected against lightning and switching surges. This shall include station shielding against direct lightning strokes, surge protection on all wound devices, and cable/overhead interfaces.

8.3.2 A tap connected to a shielded transmission circuit shall also be shielded.

8.4 GROUNDING

8.4.1. A transmitter shall ensure that grounding installations are capable of carrying the maximum foreseeable fault current, for the duration of such fault currents, without risking safety to personnel that may be present on site when a fault, damage to facilities, or interference with the operation of the transmission system occurs.

8.4.2 A transmitter shall ensure that each of its tapped transformer stations and network transformation and switching stations has a ground grid to which all metallic structures, metallic equipment and non-energized metallic equipment are solidly connected. The size, type and requirements for the ground grid are site-specific, depending on such factors as soil conditions, station size, and short-circuit level.

9. TECHNICAL REQUIREMENTS FOR TAPPED TRANSFORMER STATIONS SUPPLYING LOAD

9.1 SUPPLY CONSIDERATIONS

9.1.1 A transmitter shall ensure that tapped transformer stations, excluding those that are deemed compliant under section 4.6 of this Code, have adequate on-load tap-changer or other voltage regulating facilities to operate continuously within normal variations on the transmission system as set out in the Market Rules and to operate in emergencies with a further transmission system voltage variation of ± six percent.

9.1.2 The neutrals of the power transformer primary windings at transmission system tapped stations are normally not grounded.

9.2 PROTECTION REQUIREMENTS

9.2.1 The typical technical requirements for a transmitter's tapped transformer stations protection are set out in Exhibit E.1, Schedule E of the applicable version of Appendix 1, and Exhibits F.1 and F.2, Schedule F of version A of Appendix 1.

9.2.2 Line protections are required when transformers connected to separate supply circuits are operated in parallel on the low-voltage side, or if a large synchronous infeed exists at the low-voltage bus.

9.2.3 Directional current sensing relays may be required to detect infeed into faults within the transmission system and to isolate a tapped transformer station's contribution to the fault. Distance or impedance (21) relays as specified in Exhibit F.2, Schedule F of version A of Appendix 1, may serve this need.

9.2.4 If the tapped transformer is connected ungrounded wye or delta on the primary, then ground under-voltage (64-27) and ground over-voltage (64-59) protections as shown in Exhibit F.2, Schedule F of version A of Appendix 1 are required to detect ground faults.

9.2.5 Where the tapped transformer is connected wye-grounded on the primary (Yg/D or Yg/Yg), a ground over-current relay (64) as indicated in Exhibit F.2, Schedule F of version A of Appendix 1, connected in the transformer neutral, may be used for detection.

9.2.6 Where remote/transfer trip circuits are used for tapped transformer faults to trip the transmitter's line breakers at the terminal stations, the tapped transformer shall be equipped with a motor-operated transformer disconnect switch at that station to provide a point of separation from the transmission system. Energization of remote/transfer trip and opening of the disconnect switch (89) shall be initiated simultaneously from the protection circuits. Full opening of the disconnect switch shall block sending of remote trip.

10. PROTECTION SYSTEM REQUIREMENTS

10.1 TELECOMMUNICATIONS

10.1.1 A transmitter shall ensure that telecommunication facilities used for protection purposes have a level of reliability consistent with the required performance of the protection system.

10.1.2 A transmitter shall specify to all customers telecommunication channel media and protective systems.

10.1.3 A transmitter shall ensure that telecommunication circuits used for the protection and control of the transmission system are dedicated to that purpose.

10.1.4 Where each of the dual protections protecting the same system element requires communication channels, a transmitter shall ensure that the equipment and channel for each protection is separated physically and designed to minimize the risk that both protections might be disabled simultaneously by a single contingency.

10.1.5 A transmitter shall ensure that telecommunication systems are:

(a) designed to prevent unwanted operations such as those caused by equipment or personnel,

(b) powered by the station's batteries or other sources independent from the power system, and

(c) monitored in order to assess equipment and channel readiness.

10.1.6 Major disturbances caused by telecommunication failures shall have annual frequency of less than 0.002 per year from the dependability aspect and less than 0.002 per year from the security aspect.

10.1.7 A transmitter shall ensure that telecommunication protection for a single transmission system circuit shall be unavailable for no more than 42 minutes per year, and for two circuits, no more than four minutes per year.

10.1.8 A transmitter shall ensure that the telecommunication false-trip rate used as part of a protection system for a single transmission system circuit is no more than 0.1 false trips per year, and for two circuits, no more than 0.001 false trips per year.

10.1.9 A transmitter shall ensure that total transmission system circuit trips coincident with telecommunications failure are no more than 0.001 per year.

10.2 TEST SCHEDULE FOR RELAYING COMMUNICATION CHANNELS

10.2.1 A transmitter shall test communication channels associated with protective relaying at periodic intervals to verify that the channels are operational and that their characteristics are within specific tolerances. Testing should include signal adequacy tests and channel performance tests.

10.2.2 Signal adequacy testing for unmonitored channels shall be done at one month intervals. Signal adequacy testing for monitored channels shall be done at twelve month intervals.

10.2.3 Channel performance testing on leased communication circuits shall be conducted at 24 month intervals, while intervals for testing power line carrier equipment shall be equipment-specific.

10.3 VERIFICATION AND MAINTENANCE PRACTICES

10.3.1 A transmitter shall use the maximum verification intervals established by reliability organizations and in accordance with applicable reliability standards: (a) four years for most 115kV elements, most transformer stations, and certain 230kV elements: (b) two years for all other high- voltage elements. All newly commissioned protection systems shall be verified within six months of the initial in-service date of the system.

10.3.2 Routine verification shall ensure with reasonable certainty that the protection systems respond correctly to fault conditions.

10.3.3 A transmitter shall use an electrically initiated simulated-fault clearing check to verify new protection systems, after any wiring or component changes are made to an existing protection system, and for the routine verification of a protection system.

10.4 FUNCTIONAL TESTS AND PERIODIC VERIFICATION

10.4.1 For direct current circuitry checks, a transmitter shall thoroughly check the logic of the auxiliary circuitry with the direct current applied and the initiating devices suitably energized to initiate the process. When primary relays are the initiating device, the initiation shall be achieved by secondary injection of appropriate electrical quantities to the measuring elements. In cases where the sequence of operation is critical, monitoring by a portable sequence-of-events recorder may be required for proper analysis. Operation or tripping of any interrupting or isolating device shall always be verified, as well as annunciation and target operation.

10.4.2 A transmitter shall ensure that "on potential" checks shall follow all necessary preliminary procedures. The main equipment shall be energized but not placed on load. At its tapped transformer stations, the transmitter shall check all readings of potentials, including determination of correct phasing/phase rotation. The test must also demonstrate that all equipment performs as expected when energized and is in a condition to have primary load applied.

10.4.3 At its tapped transformer stations, a transmitter shall make "On-Load" checks following the application of appropriate load, voltage, current, phase angle or crossed wattmeter readings at the appropriate instrument transformer outputs or protection input points, to ensure that all quantities are appearing as required with respect to magnitude, phase relation, etc. These checks are to determine that relays are properly connected and that the watt and var checks of all indicating and referenced equipment are correct. At times it may be necessary to repeat some or all tests, e.g. relay performance, using load currents.

10.5 FAILURE PROTECTION FOR HIGH-VOLTAGE INTERRUPTING DEVICES

10.5.1 A transmitter shall ensure that protection is provided to trip local and remote breakers if a high voltage interrupting device (HVID) fails to clear a fault properly. The requirements for HVID failure protection vary depending on the maximum permissible fault duration and the location of the connection on the transmission system. Some portions of the transmission system are designed and operated to more stringent requirements to avoid adversely affecting neighbouring transmission systems.

10.5.2 If the IESO or the transmitter so determines, the HVID failure protection shall be achieved by using remote or transfer trip circuits and opening of the motor operated disconnect switch.

10.5.3 In portions of the transmission system having less stringent requirements, the HVID failure protection may be achieved by the opening of the motor-operated disconnect switch. If the disconnect switch experiences a flashover, the line protection at the transmitter's transmission stations shall operate to isolate the fault.

10.5.4 A transmitter shall not use automatic ground switches for any transmitter-owned new installations for triggering line protection operation following the failure of a HVID.

10.5.5 When circuit switchers are used, the interrupter and disconnect switch shall operate independently. Protection systems that trip the interrupter shall simultaneously initiate opening of the disconnect switch.

10.5.6 The direct current voltage supplied to the interrupter and disconnect switch shall be fed from separately fused and monitored direct current supplies: that is, by two direct current cables to the control cabinet.

10.6 INSTRUMENT TRANSFORMERS

10.6.1 A transmitter shall ensure that current transformer output remains within acceptable limits for all anticipated fault currents and for all anticipated burdens connected to the current transformer.

10.6.2 A transmitter shall ensure that current transformers are connected so that adjacent relay protection zones overlap.

10.6.3 A transmitter shall ensure that voltage transformers and potential devices have adequate volt-ampere capacity to supply the connected burden while maintaining their accuracy over the specified primary voltage range.

10.6.4 For each independent protection system, a transmitter shall ensure that separate current and voltage transformer or potential device secondary windings are used, except on low-voltage devices.

10.6.5 A transmitter shall ensure that interconnected current transformer secondary wiring and voltage transformer secondaries are each grounded only at a single point.

10.7 BATTERY BANKS AND DIRECT CURRENT SUPPLY

10.7.1 The customer shall ensure that if either the battery charger fails or the AC supply source fails, the station battery bank shall have enough capacity to allow the station to operate for at least eight hours for a single battery system or at least six hours for each of the batteries in a two battery system.

10.7.2. Critical DC supplies shall be monitored and annunciated such as relay protection circuits and high voltage interrupters (HVIs).

10.7.3. For all generating facilities connected to the transmission system, two separately protected (fuse/breaker) and monitored DC station battery systems are required.

10.7.4. For tap transformer stations, one protected (fuse/breaker) monitored DC station battery system is required unless two systems are specified by the Transmitter.

10.7.5. Where two battery systems are required, there shall be a battery transfer scheme.

10.7.6. Where the use of a single battery system is allowed, the following conditions shall be met:

(a) it can be tested and maintained without removing it from service;

(b) each protection system shall be supplied from physically separated and separately fused direct current circuits; and

(c) no single contingency other than failure of the battery bank itself shall prevent successful tripping for a fault.

11. EMBEDDED GENERATION AND BYPASS COMPENSATION

11.1 EMBEDDED GENERATION

11.1.1 A transmitter shall, for all purposes, treat any generation facility that came into service on or before June 8, 2004 as embedded generation in relation to a load, provided that the generation facility was always connected on the customer side of the connection point. This requirement applies regardless of ownership of the generation facility, the voltage at which the generation facility is connected, the location of the generation facility, the size or number of units of generation capacity, or any relationship between the owner of the generation facility and the customer or the load.

11.1.2 A transmitter shall, for all purposes, treat any new generation facility that comes into service after June 8, 2004 as embedded generation in relation to a load, provided that the generation facility is connected on the customer side of the connection point at the time the generation facility comes into service. This requirement applies regardless of ownership of the generation facility, the voltage at which the generation facility is connected, the location of the generation facility, the size or number of units of generation capacity, or any relationship between the owner of the generation facility and the customer or the load.

11.1.3 If at any time after a generation facility comes into service it is reconfigured so as to become connected on the customer side of the point where a load facility is connected to a transmitter's transmission facilities, the transmitter shall not for any purpose treat that generation facility as embedded generation in relation to that load.

11.1.4 If at any time after a generation facility that is connected to a transmitter's transmission system comes into service a load customer disconnects its facilities from the transmitter's transmission facilities and subsequently connects its facilities, or a load facility becomes connected:

(a) directly to the generation facility; or

(b) to the facilities of any person such that both the load facility and the generation facility are connected to the transmitter's transmission facilities on that person's side of the connection point,

the transmitter shall not for any purpose treat that generation facility as embedded

generation in relation to that load facility.

11.1.5 The reference to "for all purposes" and "for any purpose" in sections 11.1.1 to 11.1.4 includes the purpose of determining whether bypass compensation is required to be paid by the load customer and the purpose of determining the manner in which network charges will be applied.

11.2 BYPASS COMPENSATION

11.2.1 A transmitter shall require bypass compensation from a customer if:

(a) the customer disconnects its facility from the transmitter's connection facilities and subsequently connects that facility to a generation facility or to the facilities of any person such that both the load facility and a generation facility are connected to the transmitter's transmission facilities on that person's side of the connection point; and

(b) the transmitter will no longer receive line connection or transformation connection rate revenues in relation to that facility.

The transmitter shall calculate bypass compensation using the methodology set out in section 6.7.7.

11.2.2 Where a transmitter becomes aware that a customer intends to bypass a transmitter-owned connection facility in the manner described in section 11.2.1, the transmitter shall promptly notify all other load customers served by the connection facility that is intended to be bypassed.

11.2.3 A transmitter shall not require bypass compensation from a customer for any reduction in a customer's load served by the transmitter's connection facilities that the customer has demonstrated to the reasonable satisfaction of the transmitter (such as by means of an energy study or audit) has resulted from renewable embedded generation (determined in accordance with section 11.1), energy conservation, energy efficiency or load management activities, except in accordance with the transmitter's Rate Order.

12. DISPUTE RESOLUTION

12.1 OBLIGATION TO INCLUDE IN PROCEDURES

12.1.1 Subject to section 12.1.4, a transmitter shall establish a dispute resolution procedure in its connection procedures referred to in section 6.1.4 and shall implement it in the event of a dispute with a customer regarding the transmitter's obligations under the Act, the Electricity Act, its license, this Code or any of the transmitter's connection procedures.

12.1.2 The dispute resolution procedure referred to in section 12.1.1 shall include provisions that:

(a) provide for the fair, timely and effective resolution of disputes;

(b) set out specific timelines for completion of the dispute resolution process; and

(c) establish the right of the transmitter or the customer to bring a dispute to the Board for resolution, if it has not been resolved by the parties within 30 days.

12.1.3 If a dispute arises while a transmitter is constructing new or modified connection facilities for a customer, the transmitter shall not cease work or slow the pace of work without leave of the Board.

12.1.4 The dispute resolution procedure referred to in section 12.1.1 shall not apply to disputes that arise between a transmitter and a customer:

(a) that are governed by the dispute resolution process contained in their connection agreement; or

(b) that relate to the terms and conditions of a contractual arrangement that is under negotiation between the transmitter and the customer, except where one party alleges that the other party is seeking to impose a term or condition that is inconsistent with or contrary to the Act, the Electricity Act, the transmitter's licence, this Code or any of the transmitter's connection procedures.

13. COMING INTO FORCE

13.0.1 This Code shall be in effect as of the date on which it is published in the *Ontario Gazette*, and as of that date replaces the Transmission System Code issued by the Board on July 14, 2000.

APPENDIX 1
VERSION B - FORM OF CONNECTION AGREEMENT
FOR GENERATOR CUSTOMERS

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APPENDIX 1
VERSION B - FORM OF CONNECTION AGREEMENT
FOR GENERATOR CUSTOMERS

This Connection Agreement is made this ___ day of _____, _____,

BETWEEN

_____, a *[insert form of business organization]* duly *[incorporated/formed/registered]* under the laws of *[insert jurisdiction]* (the "Transmitter")

AND

_____, a *[insert form of business organization]* duly *[incorporated/formed/registered]* under the laws of *[insert jurisdiction]* (the "Customer")

(each a"Party" and collectively the "Parties")

RECITALS

WHEREAS the Customer has connected or wishes to connect its facilities to the Transmitter's transmission system.

AND WHEREAS the Transmitter has connected or has agreed to connect the Customer's facilities to its transmission system.

AND WHEREAS in accordance with its licence and the Market Rules the Transmitter has agreed to offer, and the Customer has agreed to accept, transmission service in relation to the Customer's facilities.

NOW THEREFORE in consideration of the foregoing, and of the mutual covenants, agreements, terms and conditions herein contained, the Parties, intending to be legally bound, hereby agree as follows:

PART ONE
GENERAL

1. DEFINITIONS

1.1 In this Agreement, unless the context otherwise requires:

1.1.1 "Agreement" means this connection agreement and all of the Schedules;

1.1.2. "Code" means the Transmission System Code issued by the Board and in effect at the relevant time;

1.1.3. "Confidential Information" in respect of a Party means (a) information disclosed by that Party to the other Party under this Agreement that is in its nature confidential, proprietary or commercially sensitive and (b) information derived from the information referred to in (a), but excludes information described in section 21.1;

1.1.4. "Controlling Authority" in respect of a Party means the person appointed by that Party as responsible for performing, directing or authorizing changes in the condition or physical position of electrical apparatus or devices;

1.1.5. "Cure Period" means the period of time given to a Defaulting Party for the purposes of remedying a Default, determined in accordance with section 19.2.1;

1.1.6. "Default Notice" has the meaning given to it in section 19.1.1;

1.1.7. "Defaulting Party" means a Party in relation to whom an Event of Default has occurred or is occurring;

1.1.8. "End of Cure Period Notice" has the meaning given to it in section 19.2.3;

1.1.9. "Event of Default" means a Financial Default or a Non-financial Default;

1.1.10. "Export Transmission Service" has the meaning given to it in the Transmitter's Rate Order;

1.1.11. "Financial Default" in respect of a Party means a failure by that Party to pay an amount to the other Party when due under this Agreement, including failure to pay compensation or indemnification for loss or damage agreed to by the Parties or for amounts determined to be owed to a Party as a result of the settlement or resolution of a dispute arising under this Agreement;

1.1.12. "Force Majeure Event" in respect of a Party means any event or circumstance, or combination of events or circumstances: (a) that is beyond the reasonable control of that

Party; (b) that adversely affects the performance by the Party of its obligations under this Agreement; and (c) the adverse effects of which could not have been foreseen and prevented, overcome, remedied or mitigated in whole or in part by the person through the exercise of due diligence and reasonable care, provided however that the lack, insufficiency or non-availability of funds shall not constitute a Force Majeure Event;

1.1.13. "Insolvency/Dissolution Event" in respect of a Party, means any of the following:

(a) in the case of a voluntary insolvency/dissolution, if the Party shall (i) apply for or consent to the appointment of a receiver, receiver/manager, interim receiver, trustee, administrator, or liquidator (or person having a similar or analogous function under the laws of any jurisdiction) of itself or of all or a substantial part of its assets; (ii) be unable, or state or admit in writing its inability or failure, to pay its debts generally as they become due; (iii) make a general assignment for the benefit of its creditors, or make or threaten to make a sale in bulk of all or a substantial part of its assets; (iv) commit an act of bankruptcy under the *Bankruptcy and Insolvency Act* (Canada) or under any existing or future law relating to bankruptcy and insolvency; (v) commence any proceeding or other action under any existing or future law relating to bankruptcy, insolvency, reorganization, or relief of debtors seeking to have an order for relief entered with respect to it, or seeking to adjudicate it bankrupt or insolvent, or seeking reorganization, arrangement, adjustment, moratorium, winding up, liquidation, dissolution, composition, compromise or other relief with respect to it or its debts or an arrangement with creditors, or file an answer admitting the material allegations filed against it in any bankruptcy, insolvency, or reorganization proceeding; or (vi) take any corporate action for the purpose of effecting any of (i) to (v);

(b) in the case of an involuntary insolvency/dissolution, if any proceeding or other action shall be instituted in any court of competent jurisdiction seeking in respect of the Party or of all or a substantial part of its assets (i) an adjudication in bankruptcy or for reorganization, dissolution, winding up or liquidation; (ii) a composition, compromise, arrangement or moratorium with its creditors, or other relief with respect to it or its debts; (iii) the appointment of a trustee, receiver, receiver/manager, interim receiver, administrator or liquidator (or person having a similar or analogous function under the laws of any jurisdiction); or (iv) any other similar relief under any existing or future law relating to bankruptcy, insolvency, reorganization or relief of debtors;

(c) an application is made for the winding up or dissolution or a resolution is passed or any steps are taken to pass a resolution for the winding up or dissolution of the Party, except as part of a bona fide corporate reorganization; or

(d) the Party is wound up or dissolved, except as part of a bona fide corporate reorganization, unless the notice of winding up or dissolution is discharged;

1.1.14. “Lender” in respect of a Customer means a bank or other entity whose principal business is that of a financial institution and that is financing or refinancing the Customer’s facilities;

1.1.15. “Non-defaulting Party” means a Party that is not experiencing an Event of Default;

1.1.16. “Non-financial Default” in respect of a Party means any of the following:

(a) any breach of this Agreement by that Party, other than a breach that constitutes a Financial Default;

(b) the licence (if any) of the Party is suspended, withdrawn or revoked or expires without being replaced; or

(c) an Insolvency/Dissolution Event occurs in relation to the Party;

1.1.17. “Party Losses” means any claims, losses, costs, liabilities, obligations, actions, judgments, suits, expenses, disbursements or damages of a Party, including where occasioned by a judgment resulting from an action instituted by a third party;

1.1.18. “Rate Schedule” means the rates in effect from time to time and the terms and conditions relating to those rates that are approved by the Board in the Transmitter’s Rate Order, including rates for connection service;

1.1.19. “Schedule” means a schedule listed in section 4.2.1 and any additional schedules created by the Parties under section 4.3.1;

1.1.20. “Supporting Guarantee” means operating instructions, such as instructions to open or close a switch or to lock devices in the open position, given to protect the safety of staff and the public while work is being performed by a Party; and

1.1.21. “Work Protection” means a state or condition whereby an isolated or isolated and de-energized condition has been established for work on facilities and will continue to exist, except for authorized tests, until the work relating thereto has been completed.

1.2. In this Agreement, unless the context otherwise requires, each of the following words and phrases shall have the meaning given to it in the Code (whether or not capitalized in the Code or in this Agreement): “Board”; “business day”; “connect”; “connection facilities”; “connection point”; “connection service”; “contracted capacity”; “circuit breaker”; “emergency”; “facilities”; “fault”; “forced outage”; “good utility practice”; “isolate”; “isolating device”; “licence”; “maintenance”; “outage”; “planned outage”; “promptly”; “protection system”; “protective relay”; “Rate Order”; “reliability”; “reliability organization”; “reliability standards”; “single contingency”; “site”; “transmission facilities”; “transmission service”; and “work”.

2. INTERPRETATION

2.1. Words and phrases contained in this Agreement (whether or not capitalized) that are not defined herein shall have the meanings given to them in the *Electricity Act, 1998,* S.O. 1998, c. 15, Schedule A, the *Ontario Energy Board Act, 1998*, S.O. 1998, c. 15, Schedule B, or in any regulations made under either of those *Acts*, as the case may be.

2.2. Headings are for convenience only and shall not affect the interpretation of this Agreement.

2.3. In this Agreement, unless the context otherwise requires:

(a) words importing the singular include the plural and vice versa;

(b) words importing a gender include any gender;

(c) words importing a person include: (a) an individual, (b) a company, sole proprietorship, partnership, trust, joint venture, association, corporation or other private or public body corporate; and (c) any government, government agency or body, regulatory agency or body or other body politic or collegiate;

(d) a reference to a person includes that person's successors and permitted assigns;

(e) a reference to a Party includes any person acting on behalf of that Party;

(f) a reference to the Customer's facilities is limited to such facilities as are relevant to the Customer's connection to the Transmitter's transmission system under this Agreement;

(g) a reference to a body, whether statutory or not, that ceases to exist or whose functions are transferred to another body is a reference to the body that replaces it or that substantially succeeds to its powers or functions;

(h) a reference to a document (including a statutory instrument) or a provision of a document includes any amendment or supplement to, or any replacement of, that document or that provision;

(i) the expression "including" means including without limitation, and the expressions "include", "includes" and "included" shall be interpreted accordingly; and

(j) where a word or phrase is defined in this Agreement, including by virtue of the application of section 1.2, or in any document referred to in section 2.1, other parts of speech and grammatical forms of the word or phrase have a corresponding meaning.

2.4. Except when an emergency is anticipated or is occurring, if the time for doing any act or omitting to do any act under this Agreement expires on a day that is not a business day, the act may be done or may be omitted to be done on the next day that is a business day.

3. INCORPORATION OF TRANSMISSION SYSTEM CODE

3.1 The Code is hereby incorporated in its entirety by reference into, and forms an integral part of, this Agreement. Unless the context otherwise requires, all references in this Agreement to "this Agreement" shall be deemed to include a reference to the Code.

3.2. Without limiting the generality of section 3.1:

(a) the Transmitter hereby agrees to be bound by, and at all times to comply with, the Code; and

(b) the Customer acknowledges and agrees that the Transmitter is bound at all times to comply with the Code in addition to complying with the provisions of this Agreement.

4. SCHEDULES

4.1. Incorporation of Schedules

4.1.1. The Schedules form a part of, and are hereby incorporated by reference into, this Agreement.

4.2. Schedules

4.2.1 The following are the Schedules to this Agreement:

Schedule A	-	Single Line Diagram, Description of the Customer's Connection Point(s) and Details of Specific Operations
Schedule B	-	Transmission Services and Associated Charges
	-	Attachment B1
Schedule C	-	Cure Periods for Defaults
Schedule D	-	Fault Levels and Modifications Requiring Transmitter Approval
	-	Attachment D1
Schedule E	-	General Technical Requirements
Schedule F	-	Additional Technical Requirements
Schedule G	-	Protection System Requirements
Schedule H	-	Facilities Deemed Compliant and Obligation to Comply
Schedule I	-	Exchange of Information

Schedule J - Contacts for Purposes of Notice
Schedule K - Special Provisions

4.3. Additional Schedules

4.3.1. The Parties may by mutual agreement append such additional Schedules to this Agreement as may from time to time be required. Where additional Schedules are required by virtue of the fact that technical requirements for load facilities owned by the Customer are relevant to the Customer's connection to the Transmitter's transmission system under this Agreement, the Parties shall use schedules in the form set out in schedules E and F of version A of Appendix 1 of the Code.

4.3.2. In the event of an inconsistency or conflict between a provision of an additional Schedule referred to in section 4.3.1 and a provision of this Agreement or of a Schedule referred to in section 4.2.1, the provision of this Agreement or of the Schedule referred to in section 4.2.1 shall prevail to the extent of the inconsistency or conflict.

5. NOTICE

5.1. Method of Giving Notice and Effective Date

5.1.1. Subject to section 5.1.3, any notice, demand, consent, request or other communication required or permitted to be given or made under or in relation to this Agreement shall be given or made by courier or other personal form of delivery; by registered mail; by facsimile; or by electronic mail.

5.1.2. A notice, demand, consent, request or other communication referred to in section 5.1.1 shall be deemed to have been duly given or made as follows:

(a) where given or made by courier or other form of personal delivery, on the date of receipt;

(b) where given or made by registered mail, on the sixth day following the date of mailing;

(c) where given or made by facsimile and a complete transmission report is issued from the sender's facsimile transmission equipment, on the day and at the time of transmission as indicated on the sender's facsimile transmission report, if a business day or, if the transmission is on a day which is not a business day or is after 5:00 pm (addressee's time), at 9:00 am on the following business day; and

(d) where given or made by electronic mail, on the day and at the time when the notice, demand, consent, request or other communication is recorded by the sender's electronic communications system as having been received at the

electronic mail destination, if a business day, or if that time is after 5:00 pm (addressee's time) or that day is not a business day, at 9:00 am on the following business day.

5.1.3. Any notice, demand, consent, request or other communication required or permitted to be given or made under Schedule A shall be given or made in accordance with the notice provisions contained in that Schedule.

5.2. Address for Notice

5.2.1. Any notice, demand, consent, request or other communication given or made under section 5.1.1 shall be addressed to the applicable representative of the Party identified in Schedule J. A Party may, upon written notice given to the other Party in accordance with section 5.1.1, from time to time change its address or representative for notice, and Schedule J shall be deemed to have been amended accordingly.

5.2.2. Any notice, demand, consent, request or other communication given or made under section 5.1.3 shall be addressed in accordance with Schedule A.

5.3. Exception

5.3.1. Sections 5.1 and 5.2 are subject to such other provisions of this Agreement that expressly require or permit notices, demands, consents, requests or other communications to be given or made by alternative means or to be addressed to other specified representatives of the Parties.

6. ASSIGNMENT

6.1. Subject to section 6.2, no Party may assign or transfer, whether absolutely, by way of security or otherwise, all or any part of its rights or obligations under this Agreement without the prior written consent of the other Party, which consent may not be unreasonably withheld or delayed.

6.2. The Customer may, without the prior written consent of the Transmitter, assign by way of security only all or any part of its rights or obligations under this Agreement to a Lender. The Customer shall promptly notify the Transmitter upon making any such assignment.

7. FURTHER ASSURANCES

7.1. Each Party shall promptly execute and deliver or cause to be executed and delivered all further documents in connection with this Agreement that the other Party may reasonably require for the purposes of giving effect to this Agreement.

8. WAIVER

8.1. A waiver of any default, breach or non-compliance under this Agreement is not effective unless in writing and signed by the Party to be bound by the waiver. No waiver will be inferred or implied by any failure to act or by the delay in acting by a Party in respect of any default, breach or non-compliance or by anything done or omitted to be done by the other Party. The waiver by a Party of any default, breach or non-compliance under this Agreement shall not operate as a waiver of that Party's rights under this Agreement in respect of any continuing or subsequent default, breach or non-compliance, whether of the same or any other nature.

9. AMENDMENTS

9.1. The Parties may not amend this Agreement without leave of the Board, except where and to the extent expressly permitted by this Agreement.

9.2. The Parties may by mutual agreement amend this Agreement to reflect changes that may from time to time be made to the Code during the term of this Agreement.

9.3. The Parties may, by mutual agreement unless this Agreement otherwise provides, amend the following Schedules:

(a) Schedule A;

(b) Schedule B, to reflect any changes to the Transmitter's Rate Order that may from time to time come into effect and in relation to Attachment B1;

(c) Schedule D, including Attachment D1;

(d) Schedule H, in relation to section H.1;

(e) Schedule I;

(f) Schedule J; and

(g) any Schedule added by the Parties under section 4.3.1.

9.4. The Parties shall amend this Agreement in such manner as may be required by the Board.

9.5. Any amendment to this Agreement shall be made in writing and duly executed by the Parties.

9.6. In the event of an inconsistency or conflict between a provision of an amendment to a Schedule made under section 9.3, other than an amendment made under section 9.4, and a provision of this Agreement, the provision of this Agreement shall prevail to the extent of the inconsistency or conflict.

9.7. In the event of an inconsistency or conflict between a provision of an amendment to this Agreement, other than an amendment made under section 9.4, and a provision of the Code, the provision of the Code shall prevail to the extent of the inconsistency or conflict.

10. SUCCESSORS AND ASSIGNS

10.1. This Agreement shall enure to the benefit of, and be binding on, the Parties and their respective successors and permitted assigns.

11. ENTIRE AGREEMENT

11.1. Except as expressly provided herein, this Agreement, together with the Schedules, constitutes the entire agreement between the Parties and supersedes all prior oral or written representations and agreements of any kind whatsoever with respect to the subject-matter hereof.

12. GOVERNING LAW

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

13. COUNTERPARTS

13.1. This Agreement may be executed in any number of counterparts, each of which shall be deemed to be an original and all of which taken together shall be deemed to constitute one and the same instrument. Counterparts may be executed either in original or faxed form and the Parties shall adopt any signatures received by a receiving facsimile machine as original signatures of the Parties; provided, however, that any Party providing its signature in such manner shall promptly forward to the other Party an original signed copy of this Agreement which was so faxed.

PART TWO
REPRESENTATIONS AND WARRANTIES

14. REPRESENTATIONS AND WARRANTIES

14.1. Customer's Representations and Warranties

14.1.1. Subject to section 14.3.1, the Customer represents and warrants to the Transmitter as follows, and acknowledges and confirms that the Transmitter is relying on such representations and warranties without independent inquiry in entering into this Agreement:

(a) it is duly incorporated, formed or registered (as applicable) under the laws of its jurisdiction of incorporation, formation or registration (as applicable);

(b) it has all the necessary corporate power, authority, and capacity to enter into this Agreement and to perform its obligations hereunder;

(c) the execution, delivery and performance of this Agreement by it has been duly authorized by all necessary corporate and/or governmental and/or other organizational action and does not (or would not with the giving of notice, the lapse of time or the happening of any other event or condition) result in a violation or a breach of or a default under or give rise to a right of termination, greater rights or increased costs, amendment or cancellation or the acceleration of any obligation under (i) any charter or by-law instruments of the Customer; (ii) any contracts or instruments to which the Customer is bound; or (iii) any laws applicable to it;

(d) any individual executing this Agreement, and any document in connection herewith, on behalf of the Customer has been duly authorized to execute this Agreement and have the full power and authority to bind the Customer;

(e) this Agreement constitutes a legal and binding obligation on the Customer, enforceable against the Customer in accordance with its terms;

(f) other than the facilities listed in Schedule H, its facilities meet the technical requirements of this Agreement; and

(g) it holds all permits, licences and other authorizations that may be necessary to enable it to carry on its business.

14.1.2. The Customer shall promptly notify the Transmitter of any circumstance that does or may result in any of the representations and warranties set forth in section 14.1.1 becoming untrue or inaccurate during the term of this Agreement.

14.2. Transmitters' Representations and Warranties

14.2.1. Subject to section 14.3.1, the Transmitter represents and warrants to the Customer as follows, and acknowledges and confirms that the Customer is relying on such representations and warranties without independent inquiry in entering into this Agreement:

(a) it is duly incorporated, formed or registered (as applicable) under the laws of its jurisdiction of incorporation, formation or registration (as applicable);

(b) it has all the necessary corporate power, authority, and capacity to enter into this Agreement and to perform its obligations hereunder;

(c) the execution, delivery and performance of this Agreement by it has been duly authorized by all necessary corporate and/or governmental and/or other organizational action and does not (or would not with the giving of notice, the lapse of time or the happening of any other event or condition) result in a violation or a breach of or a default under or give rise to a right of termination, greater rights or increased costs, amendment or cancellation or the acceleration of any obligation under (i) any charter or by-law instruments of the Transmitter; (ii) any contracts or instruments to which the Transmitter is bound; or (iii) any laws applicable to it;

(d) any individual executing this Agreement, and any document in connection herewith, on behalf of the Transmitter has been duly authorized to execute this Agreement and have the full power and authority to bind the Transmitter;

(e) this Agreement constitutes a legal and binding obligation on the Transmitter, enforceable against the Transmitter in accordance with its terms;

(f) other than the facilities listed in Schedule H, those of its facilities that are relevant to, or may have an impact on, the Customer's facilities meet the technical requirements of this Agreement; and

(g) it holds all permits, licences and other authorizations that may be necessary to enable it to carry on its business as a Transmitter.

14.2.2. The Transmitter shall promptly notify the Customer of any circumstance that does or may result in any of the representations and warranties set forth in section 14.2.1 becoming untrue or inaccurate during the term of this Agreement.

14.3. Transition

14.3.1. Where the provisions of this Agreement apply by virtue of the application of section 3.0.7 of the Code, the representations and warranties referred to in sections 14.1.1(f) and 14.2.1(f) shall be deemed to be given only once the parties have completed sections H.1.1 and H.1.2 of Schedule H.

PART THREE
LIABILITY AND FORCE MAJEURE

15. LIABILITY

15.1. Except as otherwise expressly provided in this Agreement, the Transmitter shall not be liable for any Party Losses of the Customer whatsoever arising out of any act or omission of the Transmitter under this Agreement unless such Party Losses result from the willful misconduct or negligence of the Transmitter.

15.2. Subject to section K.1 of Schedule K and except as otherwise expressly provided in this Agreement, the Customer shall not be liable for any Party Losses of the Transmitter whatsoever arising out of any act or omission of the Customer under this Agreement unless such Party Losses result from the willful misconduct or negligence of the Customer.

15.3. Despite sections 15.1 and 15.2 but except as otherwise expressly provided in sections 21.4, 27.13.6, 27.13.7 and 27.13.9, neither Party shall be liable to the other, whether as claims in contract or in tort or otherwise, for any loss of profits or revenues, business interruption losses, loss of contract or loss of goodwill, or for any indirect, consequential, incidental or special damages, including punitive or exemplary damages.

15.4. A Party shall have a duty to mitigate any Party Losses relating to any claim for indemnification from the other Party that may be made in relation to that other Party. Nothing in this section 15.4 shall require the mitigating Party to mitigate or alleviate the effects of any strike, lockout, restrictive work practice or other labour dispute.

15.5. A Party shall give prompt notice to the other Party of any claim with respect to which indemnification is being or may be sought under this Agreement.

16. FORCE MAJEURE

16.1. No Liability Where Force Majeure Event **Occurs**

16.1.1. Subject to sections 16.1.2 to 16.1.4, a Party shall not be liable to the other Party for any failure or delay in the performance of any of its obligations under this Agreement in whole or in part to the extent that such failure or delay is due to a Force Majeure Event.

16.1.2. The Party invoking a Force Majeure Event shall only be excused from performance under section 16.1.1:

(a) for so long as the Force Majeure Event continues and for such reasonable period of time thereafter as may be necessary for the Party to resume performance of the obligation; and

(b) where and to the extent that the failure or delay in performance would not have been experienced but for such Force Majeure Event.

16.1.3. Nothing in this section 16 shall excuse a Party from performing any of their respective emergency-related obligations in the event of an emergency.

16.1.4. A Party may not invoke a Force Majeure Event unless it has given notice in accordance with section 16.2.

16.2. Obligations Where Force Majeure Event Occurs

16.2.1. Where a Party invokes a Force Majeure Event, it shall promptly give notice to the other Party, which notice shall include particulars of:

(a) the nature of the Force Majeure Event and ,if known, of its duration;

(b) the effect that the Force Majeure Event is having on the Party's performance of its obligations under this Agreement; and

(c) the measures that the Party is taking, or proposes to take, to alleviate the impact of the Force Majeure Event.

Such notice may be given verbally, in which case the notifying Party shall as soon as practicable thereafter confirm the notice in writing.

16.2.2. Where a Party invokes a Force Majeure Event, it shall use all reasonable endeavours to mitigate or alleviate the effects of the Force Majeure Event on the performance of its obligations under this Agreement. Nothing in this section 16.2.2 shall require the mitigating Party to mitigate or alleviate the effects of any strike, lockout, restrictive work practice or other labour dispute.

16.2.3. Where a Party invokes a Force Majeure Event, it shall notify the other Party in writing as soon as practicable of the cessation of the Force Majeure Event and of the cessation of the effects of the Force Majeure Event on the Party's performance of its obligations under this Agreement.

PART FOUR
DISPUTE RESOLUTION

17. DISPUTE RESOLUTION

17.1. Exclusivity

17.1.1. Subject to sections 17.1.2 and 17.1.3:

(a) the dispute resolution procedure set forth in this section 17 shall apply to all disputes between the Customer and the Transmitter arising under or in relation to this Agreement; and

(b) the Parties shall comply with the procedure set out in this section 17 before taking any other civil or other proceeding in relation to the dispute.

17.1.2. Nothing in section 17.1.1 shall prevent a Party from seeking urgent or interlocutory relief from a court of competent jurisdiction in the Province of Ontario in relation to any dispute between them arising under or in relation to this Agreement.

17.1.3. The dispute resolution procedure set forth in this section 17 shall not apply:

(a) in relation to any matter that must or may be submitted to the Board for resolution under section 4.7.1, 6.1.8, 6.2.20, 6.2.27, 6.3.5 or 6.3.11(c) of the Code or section K.2.2 of Schedule K; or

(b) in relation to any dispute to be resolved under the Market Rules as described in section B.6 of Schedule B.

17.2. Duty to Negotiate

17.2.1. Any dispute between the Customer and the Transmitter referred to in section 17.1.1 shall be referred to a designated senior representative of each of the Parties for resolution on an informal basis as quickly as possible.

17.2.2. The designated senior representatives of the Parties shall attempt in good faith to resolve the dispute within thirty days of the date on which the dispute was referred to them. The Parties may by mutual agreement extend such period.

17.2.3. If a dispute is settled by the designated senior representatives of the Parties, the Parties shall prepare and execute minutes setting forth the terms of the settlement. Such terms shall bind the Parties. The subject-matter of the dispute shall not thereafter be the subject of any civil or other proceeding, other than in relation to the enforcement of the terms of the settlement.

17.2.4. If a Party fails to comply with the terms of settlement referred to in section 17.2.3, the other Party may submit the matter to arbitration under section 17.3.1.

17.2.5. A copy of the minutes referred to in section 17.2.3 from which all Confidential Information has been expunged shall be made available to the public by the Transmitter.

17.2.6. The Parties may not, by means of the settlement of a dispute under section 17.2.3 or section 17.5.10, agree to terms or conditions that would, if they had been the subject of an amendment to this Agreement, violate section 9.1.

17.3. Submission of Unresolved Disputes to Arbitration

17.3.1. If the designated senior representatives of the Parties cannot resolve the dispute within the time period set out in section 17.2.2 or where section 17.2.4 or 17.5.11 applies, either Party may submit the dispute to binding arbitration under sections 17.4 and 17.5 by notice to the other Party.

17.4. Selection of Arbitrator(s)

17.4.1. The Parties shall use good faith efforts to appoint a single arbitrator for purposes of the arbitration of the dispute. If the Parties fail to agree upon a single arbitrator within ten business days of the date of the notice referred to in section 17.3.1, each Party shall within five business days thereafter choose one arbitrator. The two arbitrators so chosen shall within twenty days select a third arbitrator.

17.4.2. Where a Party has failed to choose an arbitrator under section 17.4.1 within the time allowed, the other Party may apply to a court to appoint a single arbitrator to resolve the dispute.

17.4.3. No person shall be appointed as an arbitrator unless that person:

(a) is independent of the Parties;

(b) has no current or past substantial business or financial relationship with either Party, except for prior arbitration; and

(c) is qualified by education or experience to resolve the dispute.

17.5. Arbitration Procedure

17.5.1 The arbitrator(s) shall provide each of the Parties with an opportunity to be heard orally and/or in writing, as may be appropriate to the nature of the dispute.

17.5.2. The *Arbitration Act, 1991* (Ontario) shall apply to an arbitration conducted under this section 17.

17.5.3. The arbitrator(s) shall make due provision for the adequate protection of Confidential Information that may be disclosed or may be required to be produced during the course of an arbitration in a manner consistent with the confidentiality obligations of section 21.

17.5.4. All proceedings relating to the arbitration of a dispute shall be conducted in private unless the Parties agree otherwise.

17.5.5. Unless the Parties otherwise agree, the arbitrator(s) shall render a decision within ninety days of the date of appointment of the last to be appointed arbitrator, and

shall notify the Parties of the decision and of the reasons therefor.

17.5.6. The decision of the arbitrator(s) shall be final and binding on the Parties and may be enforced in accordance with the provisions of the *Arbitration Act, 1991* (Ontario). The Party against which the decision is enforced shall bear all costs and expenses reasonably incurred by the other Party in enforcing the decision.

17.5.7. A copy of the decision of the arbitrator(s) from which all Confidential Information has been expunged shall be made available to the public by the Transmitter.

17.5.8. Subject to section 17.5.9, each Party shall be responsible for its own costs and expenses incurred in the arbitration of a dispute and for the costs and expenses of the arbitrator(s) if appointed to resolve the dispute.

17.5.9. The arbitrator(s) may, if the arbitrator(s) consider it just and reasonable to do so, make an award of costs against or in favour of a Party to the dispute. Such an award of costs may relate to either or both the costs and expenses of the arbitrator(s) and the costs and expenses of the Parties to the dispute.

17.5.10. If a dispute is settled by the Parties during the course of an arbitration, the Parties shall prepare and execute minutes setting forth the terms of the settlement. Such terms shall bind the Parties, and either Party may request that the arbitrator(s) record the settlement in the form of an award under section 36 of the *Arbitration Act, 1991* (Ontario). The subject-matter of the dispute shall not thereafter be the subject of any civil or other proceeding, other than in relation to the enforcement of the terms of the settlement.

17.5.11. If a Party fails to comply with the terms of settlement referred to in section 17.5.10, the other Party may submit the matter to arbitration under section 17.3.1 if the settlement has not been recorded in the form of an award under section 36 of the *Arbitration Act, 1991* (Ontario).

17.5.12. A copy of the minutes referred to in section 17.5.10 from which all Confidential Information has been expunged shall be made available to the public by the Transmitter.

PART FIVE
TERM, TERMINATION AND EVENTS OF DEFAULT

18. TERM AND TERMINATION

18.1. Coming into Force

18.1.1. Subject to section 18.1.2, this Agreement shall come into force on the date first mentioned above and shall remain in full force and effect until terminated in accordance with this Agreement.

18.1.2.Where the provisions of this Agreement apply by virtue of the application of section 3.0.7 of the Code, those provisions shall come into force on the Code revision date and shall remain in full force and effect until terminated in accordance with this Agreement.

18.2. Termination Without Cause by Customer

18.2.1. The Customer may, if it is not then a Defaulting Party to whom a Default Notice has been delivered, terminate this Agreement at any time during the term of this Agreement by giving the Transmitter six months' prior written notice setting out the termination date.

18.2.2. Where the Customer gives notice to terminate under section 18.2.1, the Transmitter shall disconnect all of the Customer's facilities at all connection points on the termination date specified in that notice or on such other date as the Parties may agree in writing.

18.2.3. Section 20.5 shall apply in relation to the disconnection of the Customer's facilities under section 18.2.2.

18.3. Termination for Cause by Either Party

18.3.1. Termination of this Agreement by a Party by reason of a Default by the other Party shall be effected in accordance with section 19.

18.4. Provisions Relating to Termination Generally

18.4.1. Termination of this Agreement for any reason shall not affect:

(a) the liabilities of either Party that were incurred or arose under this Agreement prior to the time of termination; or

(b) that expressly apply in relation to disconnection of the Customer's facilities following termination of this Agreement.

18.4.2. Termination of this Agreement for any reason shall be without prejudice to the right of the terminating Party to pursue all legal and equitable remedies that may be available to it, including injunctive relief.

18.5. Rights and Remedies not Exclusive

18.5.1. The rights and remedies set out in this Agreement are not intended to be exclusive but rather are cumulative and are in addition to any other right or remedy otherwise available to a Party at law or in equity.

18.5.2. Nothing in section 18.5 shall be interpreted as affecting the limitations of liability set forth in section 15 or the obligation of a Party to comply with section 17 while this Agreement is in force.

18.6. Survival

18.6.1. Sections 18.4 and 18.5 shall survive termination of this Agreement.

19. EVENTS OF DEFAULT AND TERMINATION FOR CAUSE

19.1. Occurrence of an Event of Default

19.1.1. If an Event of Default occurs in relation to a Party, the Non-defaulting Party may, without prejudice to its other rights and remedies as provided for in this Agreement or at law or in equity, serve the Defaulting Party with a notice specifying the Event of Default that has occurred and the applicable Cure Period ("Default Notice").

19.2. Curing Events of Default

19.2.1. Upon receipt of a Default Notice, the Defaulting Party shall be entitled to remedy the Event of Default specified in the Default Notice:

(a) for a Financial Default, within the applicable Cure Period specified in Schedule C, calculated from the date of receipt of the Default Notice;

(b) for a Non-financial Default that has an impact that is referred to in Schedule C, within the applicable Cure Period specified for that impact in Schedule C, calculated from the date of the receipt of the Default Notice; or

(c) for a Non-financial Default that does not have an impact that is referred to in Schedule C, within a period of twenty business days from the date of receipt of the Default Notice.

The Parties may agree to a Cure Period that is longer than the Cure Period that would otherwise apply under section 19.2.1(a) or 19.2.1(b).

19.2.2. During the Cure Period, the Defaulting Party shall diligently seek to remedy the Event of Default specified in the Default Notice.

19.2.3. If the Non-defaulting Party considers that the Defaulting Party is not, during the Cure Period, diligently seeking to remedy a Non-financial Default, the Non-defaulting Party

may serve the Defaulting Party with a notice ("End of Cure Period Notice") to that effect. If, within ten business days of receiving the End of Cure Period Notice, the Defaulting Party has not commenced to diligently seek to remedy the Non-financial Default, the Cure Period shall end on the fifth business day following the date of receipt of the End of Cure Period Notice, and section 19.3.1 shall apply.

19.2.4. A Financial Default shall be considered remedied when:

(a) the Defaulting Party has paid to the Non-defaulting Party all amounts specified in the Default Notice, together with interest calculated in accordance with section 19.2.5; and

(b) the Defaulting Party has reimbursed the Non-defaulting Party for all costs of enforcement, recovery, or attempted enforcement or recovery, including reasonable legal costs and expenses, reasonably incurred by the Non-defaulting Party in relation to the Financial Default.

19.2.5. Amounts specified in a Default Notice given in relation to a Financial Default shall bear interest at the prime lending rate set by the Bank of Canada plus two percent from the date on which the Event of Default occurred until the date on which payment is sent to the Non-defaulting Party.

19.2.6. A Non-financial Default shall be considered remedied when:

(a) the Event of Default has been remedied to the reasonable satisfaction of the Non-defaulting Party; and

(b) the Defaulting Party has reimbursed the Non-defaulting Party for all costs of enforcement or recovery or attempted enforcement or recovery, including reasonable legal costs and expenses, reasonably incurred by the Non-defaulting Party in relation to the Non-financial Default.

19.3. Right to Terminate and Disconnect

19.3.1. Subject to section 19.3.2, where an Event of Default has not been remedied prior to the expiry of the applicable Cure Period, including in accordance with section 19.2.3, the Non-defaulting Party may, without prejudice to its other rights and remedies as provided for in this Agreement or at law or in equity, terminate this Agreement by written notice to the Defaulting Party. Such termination shall take effect:

(a) in the case of a Non-financial Default, on the date on which the termination notice is delivered to the Defaulting Party; or
(b) in the case of a Financial Default, on the date that is seven business days from the date on which the termination notice is delivered to the Defaulting Party.

19.3.2. The Transmitter may not terminate this Agreement under section 19.3.1 or, subject to section 19.3.5, disconnect the Customer's facilities under section 19.3.3 in relation to an Event of Default by the Customer where the issue of the Customer's default has been

referred to the dispute resolution process referred to in section 17 and the dispute has not been finally resolved.

19.3.3. The Transmitter may disconnect all of the Customer's facilities at all applicable connection points on or after the date on which this Agreement terminates under section 19.3.1.

19.3.4. Section 20.5 shall apply in relation to the disconnection of the Customer's facilities under section 19.3.3.

19.3.5.Nothing in this section 19 shall prevent the Transmitter from::

(a) disconnecting the Customer's facilities where permitted by section 21.3.1, even if the Customer is a Defaulting Party at the relevant time; or

(b) immediately disconnecting the Customer's facilities where the Transmitter reasonably believes that a Non-financial Default by the Customer is having or will have a material adverse effect on the Transmitter's transmission system or on a third party.

19.4. Lender's Right of Substitution

19.4.1. Where a Default Notice has been served on the Customer, an agent or trustee for and on behalf of a Lender ("Security Trustee") or a receiver appointed by the Security Trustee ("Receiver") shall upon notice to the Transmitter be entitled (but not obligated) to exercise all of the rights and obligations of the Customer under this Agreement and shall be entitled to remedy the Event of Default specified in the Default Notice within the applicable Cure Period. The Transmitter shall accept performance of the Customer's obligations under this Agreement by the Security Trustee or Receiver in lieu of the Customer's performance of such obligations, and will not exercise any right to terminate this Agreement under section 19.3.1 due to an Event of Default if the Security Trustee, its nominee or transferee, or the Receiver acknowledges its intention to be bound by the terms of this Agreement and such acknowledgment is received within 30 days of the date of receipt by the Customer of the Default Notice.

PART SIX
DISCONNECTION AND RECONNECTION

20. DISCONNECTION

20.1. Voluntary Permanent Disconnection by Customer

20.1.1. The Customer may at any time voluntarily and permanently disconnect some but not all of its facilities from the Transmitter's transmission facilities provided that the Customer is not then a Defaulting Party to whom a Default Notice has been delivered.

20.1.2. The Customer shall give the Transmitter notice in writing of its intention to voluntarily disconnect some of its facilities under section 20.1.1 no less than ten days before the date on which the Customer wishes to disconnect.

20.1.3. Section 20.5 shall apply in relation to the disconnection of the Customer's facilities under section 20.1.2.

20.2. Voluntary Temporary Disconnection by Customer and Reconnection

20.2.1. Where practical, the Customer shall notify the Transmitter prior to temporarily disconnecting its facilities from the Transmitter's transmission system.

20.2.2. The Transmitter shall, at the Customer's request, reconnect the Customer's facilities to its transmission system following a voluntary temporary disconnection under section 20.2.1 once the Transmitter is reasonably satisfied that all requirements of this Agreement are met, that all payments due to be paid by the Customer under this Agreement have been made and that the Customer agrees to pay all reasonable reconnection costs charged by the Transmitter. Reconnection shall be effected in accordance with the Transmitter's Board-approved reconnection procedures referred to in section 6.10.3 of the Code or, in the absence of such procedures, in accordance with the procedures agreed between the Parties.

20.3. Disconnection by Transmitter

20.3.1. The Transmitter may disconnect the Customer's facilities at any connection point and at any time throughout the term of this Agreement in any of the following circumstances:

(a) in accordance with subsection 40 (5) of the *Electricity Act, 1998*, other applicable law, the Transmitter's licence or the Market Rules;

(b) where required to comply with a decision or order of an arbitrator or court made or given under section 17;

(c) during an emergency or where necessary to prevent or minimize the effects of an emergency; or

(d) where required by an order or direction from the IESO given in accordance with the Market Rules.

20.3.2. Section 20.5 shall, to the extent applicable, apply in relation to the disconnection of the Customer's facilities under section 20.3.1.

20.4. Reconnection after Disconnection by Transmitter

20.4.1. Where a Customer's facilities have been disconnected under section 20.3 during an emergency, the Transmitter shall reconnect the Customer's facilities to its transmission facilities when it is reasonably satisfied that the emergency has ceased and that all other requirements of this Agreement are met.

20.4.2. Where a Customer's facilities have been disconnected under section 20.3 other than during an emergency, the Transmitter shall reconnect the Customer's facilities to its transmission system when it is reasonably satisfied that the reason for the disconnection no longer exists, the Customer agrees to pay all reasonable reconnection costs charged by the Transmitter, and the Transmitter is reasonably satisfied of the following, where applicable:

(a) the Customer has taken all necessary steps to prevent the circumstances that caused the disconnection from recurring and has delivered binding undertakings to the Transmitter that such circumstances shall not recur; and

(b) any decision or order of a court or arbitrator made or given under section 17 that requires the Customer to take action to ensure that such circumstances shall not recur has been implemented and/or assurances have been given to the satisfaction of the affected Party that such decision or order will be implemented.

20.4.3. Reconnection under this section 20.4 shall be effected in accordance with the Transmitter's Board-approved reconnection procedures referred to in section 6.10.3 of the Code or, in the absence of such procedures, in accordance with the procedures agreed between the Parties.

20.5. Provisions Applicable to Disconnection Generally

20.5.1. Within 20 business days of the coming into force of this Agreement, the Parties shall develop appropriate operating and decommissioning procedures for the Customer's facilities. The Parties shall comply with those operating and decommissioning procedures in relation to any disconnection of the Customer's facilities.

20.5.2. Where the Customer's facilities are disconnected, each Party shall be entitled to decommission and remove its assets associated with the connection and the applicable connection points. Each Party shall, for that purpose, provide the other Party with all necessary access to its site at all reasonable times.

20.5.3. The Customer shall continue to pay for transmission services provided up to the time of disconnection of its facilities.

20.5.4. The Customer shall pay all reasonable costs, including the costs of removing any of the Transmitter's equipment from the Customer's facilities, that are directly attributable to the disconnection and, where applicable, the subsequent decommissioning of the Customer's facilities. The Transmitter shall not require the removal of the protection and control wiring within the Customer's facilities.

20.5.5. While the Customer's facilities are disconnected, the Transmitter shall not be required to convey electricity to or from the Customer's facilities.

PART SEVEN
EXCHANGE AND CONFIDENTIALITY OF INFORMATION

21. EXCHANGE AND CONFIDENTIALITY OF INFORMATION

21.1. For purposes of this Agreement, "Confidential Information" does not include:

(a) information that is in the public domain, provided that specific items of information shall not be considered to be in the public domain merely because more general information is in the public domain and provided that the information is not in the public domain as a result of a breach of confidence by the Party seeking to disclose the information or a person to whom it has disclosed the information; or

(b) information that is, at the time of the disclosure, in the possession of the receiving Party, provided that it was lawfully obtained from a person under no obligation of confidence in relation to the information.

21.2 Subject to section 21.3, each Party shall treat all Confidential Information disclosed to it by the other Party as confidential and shall not, without the written consent of that other Party:

(a) disclose that Confidential Information to any other person; or

(b) use that Confidential Information for any purpose other than the purpose for which it was disclosed or another applicable purpose contemplated in this Agreement.

Where a Party, with the written consent of the other Party, discloses Confidential Information of that other Party to another person, the Party shall take such steps as may be required to ensure that the other person complies with the confidentiality provisions of this Agreement.

21.3. Nothing in section 21.2 shall prevent the disclosure of Confidential Information:

(a) where required under this Agreement, the Market Rules or a licence;

(b) where required by law or regulatory requirements;

(c) where required by order of a government, government agency, regulatory body or regulatory agency having jurisdiction;

(d) if required in connection with legal proceedings, arbitration or any expert determination relating to the subject matter of this Agreement, or for the purpose of advising a Party in relation thereto;

(e) as may be required to enable the Transmitter to fulfill its obligations to any reliability organization;

(f) as may be required during an emergency or to prevent an emergency; or

(g) by the Customer to a Lender or prospective Lender.

21.4. Notwithstanding any provision of section 15, a Party that breaches section 21.2 shall be liable to the other Party for any and all Party Losses of that other Party arising out of such breach.

21.5. The Parties acknowledge and agree that the exchange of information, including Confidential Information, under this Agreement is necessary for maintaining the reliable operation of the Transmitter's transmission system. The Parties further agree that all information, including Confidential Information, exchanged between them shall be prepared, given and used in good faith and shall be provided in a timely and cooperative manner.

21.6. Each Party shall comply with its information exchange obligations as set out in this Agreement, including in Schedule I. In addition, each Party shall provide the other with such information as the other may reasonably require to enable it to perform its obligations under this Agreement.

21.7. Each Party shall as soon as practicable notify the other Party upon becoming aware of a material change or error in any information previously disclosed to the other Party under this Agreement and, in the case of the Customer, in any information contained in its application for connection. The Party shall provide updated or corrected information as required to ensure that information provided to the other Party is up to date and correct.

PART EIGHT
TRANSMISSION SERVICE AND OTHER CHARGES

22. TRANSMISSION SERVICE AND TRANSMISSION SERVICE CHARGES

22.1. The Transmitter shall provide transmission services to the Customer in accordance with this Agreement and the Transmitter's Rate Order.

22.2. The Parties shall comply with their respective obligations as set out in Schedule B in relation to transmission service.

22.3. The Transmitter shall not charge the Customer for transmission services except in accordance with the Transmitter's Rate Order.

22.4. The Customer shall pay for charges for transmission services in accordance with Schedule B.

23. OTHER CHARGES AND PAYMENTS

23.1. In addition to charges for transmission service, the Transmitter may require that the Customer pay the following:

(a) a capital contribution in relation to the construction of new or modified transmission facilities, where permitted by and determined in accordance with the Code;

(b) fees or charges approved by the Board, including fees or charges approved as part of the transmitter's Board-approved connection procedures referred to in section 6.1.4 of the Code; and

(c) any other fees, charges or costs expressly provided for in this Agreement.

PART NINE
TECHNICAL AND OPERATING REQUIREMENTS

24. FACILITY STANDARDS

24.1. The Transmitter shall comply with section 4.3.1 of the Code. The Customer shall ensure that its facilities:

(a) meet all applicable requirements of the Ontario Electrical Safety Authority, subject to any exemption that may have been granted to or that may apply to the Customer;

(b) conform to all applicable industry standards, including those of the Canadian Standards Association, the Institute of Electrical and Electronic Engineers, the American National Standards Institute, and the International Electrotechnical Commission (IEC);

(c) are constructed, operated and maintained in accordance with this Agreement, the Customer's licence, the Market Rules, all applicable reliability standards and good utility practice;

(d) where they are connection facilities, are made by it with due regard for the safety of the Customer's employees and the public;

(e) where they are connection facilities, are made by it on a timely basis and are designed and constructed by it in accordance with the applicable provisions of the Transmitter's Board-approved connection procedures or, in the absence of such Board-approved connection procedures, in accordance with section 6.1.8 of the Code; and

(f) where they are connection facilities, do not materially reduce the reliability or performance of the Transmitter's transmission system and are constructed with such mitigation measures as may be required so that no new available fault current level exceeds the maximum allowable fault levels set out in Appendix 2 if this would have an adverse effect on the Transmitter unless appropriate financial arrangements have been made with the Transmitter under which the Customer will pay the incremental costs of upgrading the Transmitter's facilities to accommodate the new available fault current level.

24.2. The Customer shall ensure that those of its facilities that are connected to the Transmitter's transmission system, other than the facilities identified in section H.1 of Schedule H, comply with the basic general performance standards and technical requirements set out in the Code, including in Appendix 2.

24.3. Where the Transmitter, after conducting a Customer Impact Assessment under section 6.4 of the Code, provides the Customer with a new available fault current level, the Customer shall, at its own expense, upgrade its facilities as may be required to accommodate the new available fault current level. This obligation shall not apply where

the new available fault current level exceeds the maximum allowable fault levels set out in Appendix 2 of the Code.

24.4. The Transmitter and the Customer shall fully cooperate to ensure that modeling data required by this Agreement for the planning, design and operation of connections are complete and accurate. The Transmitter shall conduct, or may require that the Customer conduct, such tests as may be required where the Transmitter believes on reasonable grounds that the accuracy of such data is in question. The Party conducting such tests shall promptly report the results to the other Party. Where the tests are conducted by the Transmitter, the tests shall be conducted at a time that is mutually agreed by the Customer and the Transmitter, and the Customer shall reimburse the Transmitter for the costs and expenses reasonably incurred by the Transmitter in conducting the tests. If the testing is required to be rescheduled at the request of a Party or by reason of a Party's failure to attend, that Party shall pay all reasonable costs incurred by the other Party in respect of the rescheduling of the test.

24.5. The Customer shall, at the Transmitter's request, permit the Transmitter to participate in the commissioning, inspection, and testing of the Customer's facilities so as to enable the Transmitter to ensure that the Customer's facilities will not adversely affect the reliability of the Transmitter's transmission system.

24.6. Where section 24.5 applies, the commissioning, inspection or testing of the Customer's facilities shall be conducted at a time that is mutually agreed by the Customer and the Transmitter. If the commissioning, inspection or testing is required to be rescheduled at the request of a Party or by reason of a Party's failure to attend, that Party shall pay all reasonable costs incurred by the other Party in respect of the rescheduling of the commissioning, inspection or testing activity.

25. ADDITIONAL TECHNICAL REQUIREMENTS

25.1. Each Party shall comply with their respective obligations as set out in Schedules E, F and G.

25.2. Each Party shall ensure that its facilities meet the technical requirements set out in Schedules E, F and G.

26. OPERATIONAL STANDARDS AND REPORTING

26.1. As of the date of this Agreement, the fault levels at all connection points applicable to the Customer's facilities and the assumptions underlying those fault levels, as specified by the Transmitter in accordance with the Market Rules, are set out in section D.1 of Schedule D. The Transmitter shall update such fault levels as may be required under this Agreement or in response to a request by the Customer under section 26.2, and the Parties shall amend Schedule D accordingly.

26.2. The Customer acknowledges that the fault levels at connection points applicable to the Customer's facilities will change from time to time, and agrees that it may not rely upon the fault levels as specified section D.1. of Schedule D. Where the Customer reasonably

requires confirmation of the fault levels at a connection point applicable to the Customer's facilities, the Customer shall submit a request to that effect to the Transmitter. The Transmitter shall then provide the Customer with the current fault levels.

26.3. The Customer shall promptly report to the Transmitter any changes in its facilities that could materially affect the performance of the Transmitter's transmission system.

26.4. The Customer shall, at the Transmitter's request, promptly report to the Transmitter any and all incidents involving the automatic operation of the Customer's facilities' protective relays that affect the Transmitter's transmission facilities.

26.5. The Transmitter shall promptly report to the Customer any changes in its facilities that could materially affect any transmission services provided to the Customer under this Agreement.

27. OPERATIONS AND MAINTENANCE

27.1. Work on Site of Other Party

27.1.1. When a Party is conducting work at the other Party's site, the working Party shall:

(a) subject to section 27.1.2, comply with all of the host Party's practices and requirements relating to occupational health and safety and environmental protection;

(b) comply with all applicable law relating to occupational health and safety and environmental protection; and

(c) comply with all of the host Party's reasonable practices and requirements relating to security of the host Party's site, including entering into an access agreement on reasonable terms relating to security of the host Party's site.

27.1.2. When a Party is conducting work at the other Party's site, the working Party shall comply with its own practices and requirements in relation to occupational health and safety and environmental protection:

(a) to the extent permitted by the host Party, which permission shall not be granted unless the host Party is satisfied that the working Party's practices and requirements provide for a level of safety or protection that equals or exceeds its own; or

(b) to the extent that the host Party has not made its practices or requirements known to the working Party.

27.2. General

27.2.1. Each Party shall ensure that its facilities are operated and maintained only by persons qualified to do so.

27.2.2. Each Party shall operate and maintain its facilities in accordance with Schedule A.

27.3. Controlling Authorities

27.3.1. The Controlling Authority for each Party is the person identified as such in Schedule A. A Party may, by written notice to the Controlling Authority of the other Party, from time to time change its Controlling Authority, and the Parties shall amend Schedule A accordingly.

27.3.2. A Party shall comply with any request received from the Controlling Authority of the other Party.

27.4. Communication Between the Parties

27.4.1. Except as otherwise provided in this Agreement, all communications between the Parties relating to routine operating and maintenance matters shall be exchanged between the Parties' respective Controlling Authorities in accordance with the contact information set out in Schedule A, or as otherwise specified in Schedule A.

27.4.2. Each Party shall provide the other Party with a communications protocol to be used by that other Party in emergency situations. The protocol shall include the name of the Party's site emergency coordinator.

27.5. Switching

27.5.1 Each Party shall, through its Controlling Authority, develop a written protocol that establishes the conditions for, and the coordination of, switching in respect of equipment under its control.

27.5.2. The Parties shall, through their respective Controlling Authorities, approve one another's switching protocols.

27.5.3. A Party may, with the consent of the other Party, appoint an employee of the other Party as its designate for switching purposes, provided that orders to operate must be issued by the Party's Controlling Authority.

27.5.4. The Transmitter may issue to the Customer, and the Customer shall comply with, such switching instructions as may be required to maintain the security and reliability of the Transmitter's transmission system.

27.5.5. The Controlling Authorities of the Parties shall, prior to the time at which any switching activity is to occur, agree upon procedures for such switching activity.

27.6 Isolation of Facilities at Customer's Request

27.6.1. A Party shall not, other than in an emergency, operate an isolating disconnect switch except on prior notice to the other Party.

27.6.2. If the Customer requires isolation of its own facilities or of facilities under the Transmitter's control, the Customer's Controlling Authority shall deliver a written notice to that effect to the Transmitter's Controlling Authority. The written notice shall contain the following:

(a) a request that the Transmitter's Controlling Authority provide a Supporting Guarantee;

(b) the Transmitter's assigned equipment operating designations, if applicable; and

(c) the Customer's assigned equipment operating designations, if the Transmitter's equipment operating designations have not been assigned.

27.6.3. After the written notice referred to in section 27.6.2 has been delivered, the Customer's Controlling Authority may request, and the Transmitter's Controlling Authority shall ensure, that the isolation and subsequent reconnection of the Customer's relevant equipment is done on a timely basis. The Parties shall bear their own costs and expenses associated with such isolation and reconnection.

27.6.4. The Transmitter may, provided that it has given advance notice to the Customer, lock the isolating disconnect switch in the open position in any of the following circumstances:

(a) where necessary to protect the Transmitter's personnel or equipment and the Transmitter has received a Supporting Guarantee from the Customer, in which case the lock shall be under the Transmitter's control for the duration of the Supporting Guarantee;

(b) where the operation of the Transmitter's equipment interferes with the operation of the Customer's equipment;

(c) where equipment owned by either Party interferes with the operation of the Transmitter's transmission system; or

(d) where the Transmitter has been directed by the IESO to do so in accordance with the Market Rules.

27.7. Isolation of Facilities at Transmitter's Request

27.7.1. If the Transmitter requires isolation of its own facilities from the Customer's facilities or isolation of facilities under the Customer's control, the Transmitter's Controlling Authority shall deliver a written notice to that effect to the Customer's Controlling Authority. The written notice shall contain a request that the Customer's Controlling Authority provide a Supporting Guarantee that identifies the Customer's assigned equipment operating designations.

27.7.2. After the written notice referred to in section 27.7.1 has been delivered, the Transmitter's Controlling Authority may request, and the Customer's Controlling Authority shall ensure, that the isolation and subsequent reconnection of the Transmitter's relevant equipment is done on a timely basis. The Parties shall bear their own costs and expenses associated with such isolation and reconnection.

27.8. Alternative Method of Isolation

27.8.1. A Party may establish its own Work Protection in place of obtaining a Supporting Guarantee from the other Party.

27.8.2. The Party whose facilities are required in order to establish Work Protection shall provide the other Party with access to those facilities.

27.8.3. Establishing Work Protection shall be limited to the hanging of tags and the locking of devices.

27.9. Forced Outages

27.9.1. Where the forced outage of the facilities of one Party adversely affects the facilities of the other Party, the Controlling Authority of the Party experiencing the forced outage shall promptly notify the Controlling Authority of the other Party of the forced outage.

27.9.2. The Controlling Authority of a Party shall have sole authority to identify the need for and to initiate a forced outage of that Party's facilities.

27.10. Planned Work

27.10.1. Where planned work to be performed by a Party may affect the safety of the other Party's personnel, the Party performing the work shall provide the other Party with all required Work Protection documentation and related notices in writing or by such other means as they may agree in writing.

27.10.2. Where planned work on the facilities of a Party:

(a) requires the participation or cooperation of the other Party; or

(b) could adversely affect the normal operation of the other Party's facilities,

the other Party shall use commercially reasonable efforts to accommodate the planned work and shall negotiate in good faith the reasonable procedures and cost sharing criteria applicable to the planned work.

27.10.3. The Customer shall take all reasonable steps to ensure that all anticipated and planned outages of its facilities for each calendar year are submitted to the Transmitter by October 1st of the preceding year.

27.10.4. All planned work on the Customer's facilities that may affect the Transmitter's transmission facilities shall be scheduled by the Customer with the Transmitter's Controlling Authority.

27.10.5. Where the Customer plans work on its facilities that:

(a) requires a feeder breaker to be opened or operated;

(b) requires any disconnection or isolation from any facilities of either Party that are less than 50 kV, such as a feeder breaker;

(c) will result in power flow changes of greater than 5 MW; or

(d) will involve a transfer or switching operation that directly affects the Transmitter's transmission facilities,

the Customer's Controlling Authority shall submit a request to the Transmitter's representative identified in Schedule A, including a request to provide a Supporting Guarantee where applicable. Such request shall be submitted in writing and shall be submitted at least four days in advance of the planned work or within such other period as the Parties may agree.

27.10.6 Where the Customer plans work on its facilities that requires that multiple feeder breakers, a station bus or a whole transformer station be operated, the Customer's Controlling Authority shall submit a request to the Transmitter's representative identified in Schedule A, including a request to provide a Supporting Guarantee where applicable. Such request shall be submitted in writing and shall be submitted at least ten days in advance of the planned work or within such other period as the Parties may agree.

27.10.7. Where the Transmitter plans work on its facilities that directly affects the Customer's facilities and that requires that multiple feeder breakers, a station bus or a whole transformer station be operated, the Transmitter's Controlling Authority shall give notice of the planned work to the Customer's representative identified in Schedule A. Such notice shall be submitted in writing and shall be submitted at least ten days in advance of the planned work or within such other period as the Parties may agree.

27.10.8. Where the Transmitter plans work on its facilities that directly affects the Customer's facilities and that requires a feeder breaker to be opened or operated, the Transmitter's Controlling Authority shall give notice of the planned work to the Customer's representative identified in Schedule A. Such notice shall be submitted in writing and shall be submitted at least four days in advance of the planned work or within such other period as the Parties may agree.

27.10.9. The Controlling Authority of a Party may submit to the other Party a written request for permission to re-schedule planned work that has been previously notified to or scheduled with that other Party. Such request must be given in writing at least two business days prior to the date on which the planned work was originally scheduled to occur.

27.10.10. If a Party's request to re-schedule cannot be reasonably accommodated by the other Party and the Parties cannot agree on an alternate date, the matter shall be submitted to the dispute resolution process set out in section 17.

27.11. Shutdown of Customer's Facilities

27.11.1. The Customer's Controlling Authority shall promptly notify the Transmitter's Controlling Authority in the event that the Customer's facilities are shut down for any reason. The Transmitter shall investigate and determine the cause of the shutdown, using available evidence including input from the Customer's staff.

27.11.2. Once the Transmitter is satisfied that reconnection of the Customer's facilities following a shut down will not adversely affect the Transmitter's transmission system, the Transmitter shall notify the Customer as soon as practicable that it may reconnect its facilities to the Transmitter's transmission facilities. The Customer shall not reconnect its facilities to the Transmitter's transmission facilities following a shut down until authorized to do so by the Transmitter's Controlling Authority. Reconnection shall be effected in accordance with the Transmitter's Board-approved reconnection procedures referred to in section 6.10.3 of the Code or, in the absence of such procedures, in accordance with procedures agreed between the Parties.

27.12. Emergency Operations

27.12.1. During an emergency or in order to prevent or minimize the effects of an emergency, a Party may without prior notice to the other Party take whatever immediate action it deems necessary to ensure public safety or to safeguard life, property or the environment.

27.12.2. Where a Party takes action under section 27.12.1, it shall promptly report the action taken and the reason for that action to the other Party's Controlling Authority.

27.12.3. In an emergency, the Parties shall communicate in accordance with the communications protocols provided to one another under section 27.4.2.

27.13. Access to and Security of Facilities

27.13.1. Each Party shall ensure that its facilities are secure at all times. Where a Party's facilities are located on the site of another Party, the Parties shall cooperate to ensure the security of those facilities in accordance with section 27.1.1(c).

27.13.2. Each Party shall be entitled to access the site or facilities of the other Party at all reasonable times where required in order to carry out work on its facilities or where otherwise permitted or required under this Agreement. Such access shall be effected in accordance with sections 27.13.4 and 27.13.5.

27.13.3. Each Party shall, to facilitate the exercise by the other Party of its access rights, provide that other Party with all applicable access procedures, including procedures relating to access codes and keys.

27.13.4. Where a Party wishes to exercise its right of access to the site or facilities of the other Party, the accessing Party shall provide reasonable prior notice to the host Party of the date, time and location of access and of the nature of the work to be undertaken. Where the accessing Party's access cannot reasonably be accommodated by the host Party, the Parties shall agree on another date and time for access.

27.13.5. Where a Party is exercising its right of access, the Party shall:

(a) comply with the obligations set out in section 27.1;

(b) ensure that any person that will have access to the host Party's site or facilities has been properly trained;

(c) comply with the procedures provided to it by the host Party under section 27.13.3;

(d) not damage or interfere with the host Party's property (provided that the exercise of the right of access shall not itself be considered interference); and

(e) not interact with representatives of the host Party other than the person designated for such purpose by the host Party or as may be permitted by that designated person.

27.13.6. Where an accessing Party causes damage to or loss of any property of the host Party, the accessing Party shall promptly notify the host Party. Notwithstanding any provision of section 15, the accessing Party shall pay to the host Party the host Party's reasonable costs of repairing such property or, if such property cannot be repaired, of replacing such property.

27.13.7. Where the property of a Party is on the site of the other Party, the host Party shall not interfere with or cause damage to or the loss of that property. Where the host

Party causes such damage or loss, the host Party shall promptly notify the other Party. Notwithstanding any provision of section 15, the host Party shall pay to the other Party the other Party's reasonable costs of repairing such property or, if such property cannot be repaired, of replacing such property.

27.13.8. In addition to the general right of access referred to in section 27.13.2, the Transmitter may access the site or facilities of the Customer in order to ensure that the Customer's facilities comply with the requirements of this Agreement or for the purpose of investigating a threat or potential threat to the security of the Transmitter's transmission system. Such right of access shall be exercised in accordance with the provisions of this section 27.13.

27.13.9. Nothing in this section 27.13 shall prevent or restrict a Party from doing any of the following in an emergency or where required to prevent or minimize the effects of an emergency:

(a) interfering with the property of the other Party that is on its site; or

(b) accessing the site of the other Party without notice.

Where a Party takes such action in an emergency and causes damage to or loss of the property of the other Party, the acting Party shall promptly notify the other Party. Notwithstanding any provision of section 15, the acting Party shall pay to the other Party the other Party's reasonable costs of repairing such property or, if such property cannot be repaired, of replacing such property.

28. INSPECTION, TESTING, MONITORING AND NEW, MODIFIED OR REPLACEMENT CUSTOMER FACILITIES

28.1. General Requirements

28.1.1. The Customer shall inspect, test and monitor its facilities to ensure continued compliance with all applicable instruments and standards referred to in paragraphs (a) to (c) of section 24.1.

28.1.2. Where the Transmitter carries out any inspection, testing or monitoring of the Customer's facilities where required or permitted under this Agreement, the Customer shall pay the Transmitter's reasonable costs of doing so.

28.1.3. The Transmitter shall inspect, test and monitor its transmission facilities to ensure continued compliance with all applicable instruments and standards referred to in section 4.3.1 of the Code.

28.1.4. Each Party shall maintain complete and accurate records of the results of all performance inspection, testing and monitoring that it conducts in fulfillment of its obligations under this Agreement. Such records shall be maintained by each Party for a minimum of seven years or for such shorter time as the Board may permit.

28.1.5. Each Party shall, at the request of the other, provide the other Party with the records referred to in section 28.1.4. Without limiting the generality of the foregoing, the Customer shall, at the Transmitter's request, provide the Transmitter with:

(a) test certificates certifying that the Customer's facilities have passed all relevant tests and comply with all applicable instruments and standards referred to in paragraphs (a) to (c) of section 24.1; and

(b) copies of any certificates of inspection received from the Ontario Electricity Safety Authority in relation to the Customer's facilities.

28.2. New, Modified or Replacement Customer Facilities

28.2.1. The Customer shall, at the Transmitter's request, permit the Transmitter to inspect, test or witness the commissioning of any of the Customer's new, modified or replacement facilities where the Transmitter reasonably considers that such new, modified or replacement facilities may adversely affect the performance of the Transmitter's transmission system. The Customer shall pay the Transmitter's reasonable costs of doing so.

28.2.2. Where section 28.2.1 applies, the inspection, testing or commissioning of the Customer's facilities shall be conducted at a time that is mutually agreed by the Customer and the Transmitter. If the inspection, test or commissioning is required to be rescheduled at the request of a Party or by reason of a Party's failure to attend, the Party shall pay all reasonable costs incurred by the other Party in respect of the rescheduling of the inspection, testing or commissioning activity.

28.2.3. The Customer shall, at the Transmitter's request, provide the Transmitter with test certificates, including any certificates of inspection that the Ontario Electrical Safety Authority may have issued, certifying that any of the Customer's new, modified or replacement facilities have passed the relevant tests and comply with all applicable instruments and standards referred to in paragraphs (a) to (c) of section 24.1. The Transmitter may require the provision of these certificates as a condition of connecting any of the Customer's new, modified or replacement facilities. The Customer acknowledges that the Transmitter cannot, where a connection authorization issued by the Ontario Electrical Safety Authority is required in relation to the Customer's new, modified or replacement facilities, connect such facilities unless that connection authorization has been issued.

28.2.4. The Transmitter shall provide to the Customer such technical parameters as may be required to assist the Customer in ensuring that the design of the Customer's facilities shall be consistent with the requirements applicable to the Transmitter's transmission system as set out in this Agreement.

28.2.5. The Customer shall not make any modifications to its facilities of a type that is specified in section D.2 of Schedule D without the prior approval of the Transmitter.

28.2.6. Where the Transmitter considers that a type of modification that is not already specified in section D.2 of Schedule D is likely to have a material adverse effect on the Transmitter's transmission facilities, on the facilities of another of the Transmitter's customers or on the facilities of one of the Transmitter's neighbouring Ontario transmitters, the Transmitter shall so notify the Customer. The Parties shall then negotiate in good faith appropriate amendments to section D.2 of Schedule D.

PART TEN
SCHEDULE K

29. COMPLIANCE WITH SCHEDULE K

29.1. The Parties shall comply with their respective obligations under Schedule K.

IN WITNESS WHEREOF, the Parties hereto, intending to be legally bound, have caused this Agreement to be executed by their duly authorized representatives.

Name of Transmitter	Name of Customer
By: Name:_____	By: Name:_____

SCHEDULE A

SINGLE LINE DIAGRAM, DESCRIPTION OF THE CUSTOMER'S CONNECTION POINT(S) AND DETAILS OF SPECIFIC OPERATIONS

A.1. SINGLE LINE DIAGRAM AND CONNECTION POINT(S)

[to be inserted by the Parties]

A.2. LIST OF FACILITIES ON THE PROPERTY OF THE OTHER PARTY

A.2.1. The following Customer facilities are located on the Transmitter's site:

[to be completed by the Parties]

A.2.2. The following Transmitter's transmission facilities are located on the Customer's site:

[to be completed by the Parties]

A.3. TELEPHONE CONTACT

A.3.1. Either Party has the right to change the position designations and telephone numbers listed below with immediate effect at any time by notice in writing delivered to the other Party by fax or other telegraphic means. Any employee of a Party with apparent authority may deliver such a notice to the other Party.

Day-to-Day Operations

For the operation of the Transmitter's transmission facilities and the Customer's facilities.

Transmitter	Customer
Operating Contacts: Position: Name: Location: Phone Number: Fax Number:	
Outage Planning: Position: Name: Location: Phone Number: Fax Number:	

Position: Name: Location: Phone Number: Fax Number:
Position: Name: Location: Phone Number: Fax Number:

Notes:

Contract Administration for operating services

	Transmitter	**Customer**
Position: Name: Location: Phone Number: Fax Number:		
Position: Name: Location: Phone Number: Fax Number:		
Position: Name: Location: Phone Number: Fax Number:		

A.4. OWNER AND OPERATING CONTROL

A.4.1. A Party may change its designated controlling authority set out below at any time during the term of the Agreement, subject to the following conditions:

(a) the Transmitter may change its designated controlling authority only for the Transmitter's transmission facilities;

(b) the Customer may change its designated controlling authority only for the Customer;

(c) either Party shall notify the other in writing of any change in its designated controlling authority at least ten business days before implementing a change; and

(d) notification of any changes to the controlling authority shall be exchanged between the Transmitter and the Customer as follows:

Transmitter	The Customer
Director - Transmission Operations Division	General Manager [Appropriate level of Management to be identified by the Customer]
All affected Controlling Authorities and Transmission Operations Management Centre	All affected Controlling Authorities

A.4.2. The Customer:

(a) owns:

(b) has operating control of:

A.4.3. The Transmitter:

(a) owns:

(b) has operating control of:

A.5. Metering Facilities Diagram

This diagram is based on the protection, control, and metering diagram.

A.6. Normal Operations

This Schedule shall include Customer-specific Information during normal operations.

A.7. Emergency Operations

This Schedule would include Customer specific Information during Emergency operations.

A.8. Re-verification Schedules-Protection and Control (sample only)

A.8.1. A Customer shall re-verify its station protections and control systems that can impact on the Transmitter's transmission system. The verifications will generally be carried out during generation outages. Where this cannot be accommodated within the time periods required for NPCC reporting, an entry will be made in the "EXCEPTIONS TO THE MAINTENANCE CRITERIA FOR BULK SYSTEM PROTECTION". The target date for the completion of the program will be indicated.

A.8.2. Customer shall advise the Transmitter at least fourteen (14) business days' notice of its intention to conduct a reverification test, so that the Transmitter's protection and control staff and system performance staff (if required) can observe:

(a) re-verification of protection equipment settings specified in this Agreement;
(b) relay recalibration;
(c) test tripping of station breakers that impact on the Transmitter/Customer interface measurement and analysis of secondary AC voltages and currents to confirm measuring circuit integrity as well as protection directioning; and
(d) measurement and analysis of secondary AC voltages and currents to confirm measuring circuit integrity.

Note: All tests must be coordinated and approved ahead of time through the normal outage planning process.

A.8.3. The following specific actions are required:

(a) observe all station protections that trip and open the "enter the devices that interface with the Transmitter" for proper operation; and

(b) confirm that settings approved by the Transmitter are applied to the following protections:

(i) over and under voltage;

(ii) transformer differential;

(iii) transformer phase and ground backup protection;

(iv) line protections;

(v) breaker or HVI failure protection; and

(vi) transfer and remote trip protections.

A.9. General Protections (sample only)

1. There are no line protections at Site.

2. Transformer faults are cleared by the high voltage (HV) and medium voltage (MV) breakers.

3. The transformer protection sends a block to the Transmitter's network transformer station or switching station to prevent out of zone tripping.

4. Breaker failure protection sends transfer trip and it is then cascaded to other stations.

5. Under Frequency Load Shedding relays that operate as follows:

[Set out Particulars]

A.10. Telecommunication Facility Details for Protection and Control Applications (sample only)

A.10.1. Telecommunication Medium

The communication medium used will be two (2) leased telephone circuits from Bell Telephone and these circuits are the responsibility of the Customer

A.10.2. Types of Telecommunication Channels

2 Blocking Channels
2 Transfer Trip Channels

A.10.3. Ownership of Telecommunication Terminal Equipment

The terminal equipment located at a given facility is owned by the Customer. The communication medium (leased telephone circuits) is considered to be owned by the Customer. Therefore, the Customer is responsible for the restoration of the failed communication medium.

The terminal equipment located at a switching station is owned by the Transmitter.

A.10.4. Responsibility for Work and Costs Associated with Breakdown and Routine Maintenance

If maintenance is required on the terminal equipment located at the Customer's facility, the Customer will bear all incurred costs.

If maintenance is required on terminal equipment located at sites owned by the Transmitter, the Transmitter will bear all incurred costs.

If maintenance or repair is required on the leased telephone circuits, the Customer will incur all associated costs. These costs will include charges by Bell Telephone and the Transmitter if its personnel are required to participate in any of the related activities.

A.10.5.Reverification Schedule

Routine Maintenance on communication equipment and the communication channels must be performed every two years.

A.10.6.Inventory of Communication Equipment

The provision of spare communication equipment is the Customers' responsibility and will be located at its site.

A.10.7.Failure of Communication Equipment

If a communication failure affects either the transfer trip channels or the blocking channels; the Transmitter will decide whether or not the Customer should remain connected to the high-voltage system. The Transmitter must advise the Customer, through the appropriate communication protocol outlined in this code, of the situation, the choices available to the Customer and the risks involved. Since the Transmitter will take the decision according to its own interests, the Customer can choose to remain or separate from the high-voltage system at its own risk.

A.10.8.Mean Time for Repairs

The mean time for repairs will be within two working days, dependent on the availability of staff of Bell Telephone and the Transmitter.

A.10.9.Provision of Purchase Order by Customer to Transmitter

The Customer will provide the Transmitter's designated leader with a purchase order, so that the Transmitter may apply appropriate charges to the Customer.

SCHEDULE B

TRANSMISSION SERVICES AND ASSOCIATED CHARGES

B.1. This Schedule applies where the Customer's facilities are connected to those of the Transmitter's transmission facilities that form part of the IESO-controlled grid.

B.2. In this Schedule and in Attachment B1:

(a) the terms "Delivery Point" and "Network Service" shall have the meaning given to them in the Transmitter's Rate Order; and

(b) the terms "Registered Wholesale Meter", "Metering Registry" and "Metering Service Provider" shall have the meaning given to them in the Market Rules.

B.3. The Customer shall not be entitled to receive, and the Transmitter shall not be required to provide, any transmission services unless the Customer and the Customer's facilities comply with all applicable requirements of this Agreement and with all revenue metering and associated billing and settlement requirements of the Market Rules.

B.4. Where the Customer wishes to obtain Export Transmission Service, the Customer shall arrange for and obtain that transmission service in accordance with the requirements of the Market Rules.

B.5. Charges for transmission services provided to the Customer shall be determined and billed in accordance with the Transmitter's Rate Order and the Market Rules.

B.6. Transmission service charges shall be paid by the Customer to the IESO in accordance with the Market Rules. A dispute related to an amount payable by the Customer to the IESO on account of transmission service charges that is subject to the dispute resolution provisions of the Market Rules shall be resolved in accordance with those provisions. Nothing in this section B.6 shall preclude a Customer from initiating a dispute under this Agreement in relation to the applicability of transmission service charges or the classification of transmission service charges.

B.7. The Parties may agree to use Attachment B1 or an amended version of Attachment B1 in connection with the payment of transmission service charges.

Attachment B1

Billing for Transmission Service Charges and Designation of Agent (as permitted by section B.7 of Schedule B)

As contemplated in the Transmitter's Rate Order, the IESO will submit invoices for transmission services to market participants that utilize Network Service or Export Transmission Service.

The Market Rules and the Transmitter's Rate Order require that transmission service charges payable by transmission customers shall be collected by the IESO. The billing and settlement processes used by the IESO are designed to collect transmission service charges from entities that are market participants, using meter readings that are totalized and loss adjusted. The Customer shall ensure that any Registered Wholesale Meter used for the purposes of determining transmission service charges payable by the Customer satisfy the wholesale metering requirements and associated obligations specified in Chapter 6 of the Market Rules (including the appendices to that Chapter).

The Customer may wish to designate to another entity that is a market participant (referred to as the "Transmission Customer Agent") the responsibility for paying some or all of the transmission service charges payable by the Customer and the responsibility for satisfying the wholesale metering requirements and associated obligations specified in Chapter 6 of the Market Rules (including the appendices to that Chapter). Any such designation shall be made on the basis of delivery points and associated connection points with respect to which the Customer has transferred the obligations to the Transmission Customer Agent.

Where the Customer wishes to so designate another entity as its Transmission Customer Agent, the Customer and the Transmission Customer Agent shall sign the form set out below and return it to the Transmitter. Once the designation takes effect, the transmission service charges payable by the Transmission Customer Agent will be calculated by the IESO as though the Transmission Customer Agent were the Customer with respect to the designated connection points at the applicable delivery points. Except as otherwise provided in Schedule B, the demand designated to the Transmission Customer Agent by the Customer shall not be aggregated with any demand for which (a) the Customer retains the obligation to pay transmission service charges, (b) the Customer designates the obligation to another entity, or (c) another customer of the Transmitter designates the obligation to the Transmission Customer Agent.

Transmission Customer Designation Form

The undersigned Customer hereby transfers to the undersigned Transmission Customer Agent, and the undersigned Transmission Customer Agent hereby assumes and agrees to honour, all obligations and responsibilities for each Registered Wholesale Meter and the payment of transmission service charges associated with the connection points listed below. This transfer of obligations and responsibilities is in accordance with Schedule B of the Connection Agreement between the Customer and the Transmitter. The undersigned Transmission Customer Agent hereby agrees to register as a market participant with the IESO and to be subject to all of the

requirements of the Market Rules for the purposes of payment of transmission service charges associated with the delivery points and associated connection points listed below. The Customer and the Transmission Customer Agent, as applicable, undertake to notify and oblige their respective Metering Service Provider(s) to ensure that the Metering Registry data maintained by the IESO in accordance with Chapter 6 of the Market Rules (including the appendices to that Chapter) is updated consistent with this designation.

List of delivery points and associated connection points for which obligations and responsibilities are transferred:

Delivery point	**Description of associated connection points**

On Behalf of Customer	On Behalf of Transmission Customer Agent
Signed: _____	Signed: _____
Title: _____	Title: _____
Date: _____	Date: _____
Business Name and Address:	Business Name and Address:
_____	_____
_____	_____
_____	_____
_____	_____

Received by Transmitter

Business Name: _____

Signed: _____

Title: _____

Date: _____

The designation contained herein shall become effective once the Metering Service Provider(s) for the Customer and the Transmission Customer Agent submit(s) the information required in accordance with the change management process for the Metering Registry maintained by the IESO.

SCHEDULE C

CURE PERIODS FOR DEFAULTS

C.1. The Cure Period for a Financial Default shall be:

(a) seven business days; or

(b) ten business days, where notice has been given to the Transmitter under section 19.4.1.

C.2. The Cure Period for a Non-financial Default shall depend on the impact of the Non-financial Default, determined by the Non-defaulting Party as follows:

Impact of Default	**Description**	**Cure Period**
Safety - Immediate	A Non-financial Default that could result in immediate injury or loss of life (e.g., exposed wires, destroyed station fence, etc.).	Promptly
Safety - Potential	A Non-financial Default that could result in injury or loss of life if a single contingency were to occur (e.g., substandard grounding)	Promptly
Environment – Immediate	A Non-financial Default that could result in immediate adverse effects on land, air, water, plants, or animals	Promptly
Asset Integrity	A Non-financial Default that could adversely affect the ability of an asset to operate within prescribed ratings (voltage, thermal, short circuit) or be maintained to required standards for the purpose of prolonging the lifespan of the asset or satisfying safety or environmental requirements	Promptly
Environmental - Potential	A Non-financial Default that could, if a single contingency were to occur, result in adverse effects on land, air, water, plants, or animals	30 days
Power Quality	A Non-financial Default that could result in a variation in electric power service that could cause the failure or improper or defective operation of end-use equipment, such as voltage sag, overvoltage, transients, harmonic distortion and electrical noise	30 days

C.3. Where a Non-financial Default can have more than one impact and the impacts have different Cure Periods, the shortest of the Cure Periods shall apply.

SCHEDULE D
FAULT LEVELS AND MODIFICATIONS REQUIRING APPROVAL BY THE TRANSMITTER

D.1. FAULT LEVELS

[to be completed by the Parties and updated as required, using Attachment D1 or an amended version of Attachment D1 if desired]

D.2. MODIFICATIONS REQUIRING APPROVAL BY THE TRANSMITTER

D.2.1. In accordance with sections 28.2.5 and 28.2.6, the following modifications to the Customer's facilities may not be made by the Customer without the prior approval of the Transmitter:

[to be completed by the Parties]

Attachment D1

Fault Levels
(as permitted by section D.1 of Schedule D)

Tariff Delivery Point	Supply Voltage (kV)	Tx Connection Point Number	Tx Connection Point	Fault Level (kA)

SCHEDULE E

GENERAL TECHNICAL REQUIREMENTS

1.1 Guidelines of Reliability Organizations

1.1.1. Customers and Transmitters shall follow all reliability organizations' standards as they may be amended from time to time.

1.1.2. The Transmitter shall provide to Customers upon request, the address and contact persons at the relevant reliability organization.

1.2. Isolation from the Transmission System

1.2.1. The Customer shall provide an isolating disconnect switch or device at the point or junction between the Transmitter and the Customer, i.e., at the point of the interconnection, which physically and visually opens the main current-carrying path and isolates the Customer's facility from the transmission system.

1.2.2. The isolating disconnect switch shall meet the following criteria:

1.2.2.1. it shall simultaneously open all phases (i.e., group-operated open/close) to the connection;

1.2.2.2. it shall be lockable in the open and closed positions;

1.2.2.3. when the device is used as part of the HVI failure protection system, it shall be motor-operated and equipped with appropriate control circuitry; and

1.2.2.4. it shall be suitable for safe operation under the conditions of use.

1.3. Protection and Control

1.3.1. The protection systems, which protects transmission system elements, shall be capable of minimizing the severity and extent of disturbances to the transmission system while themselves experiencing a first-order single contingency such as the failure of a relay protection system to operate or the failure of a breaker to trip. In particular:

1.3.1.1. the elements designated by the Transmitter as essential to system reliability and security shall be protected by two protection systems. Each system shall be independently capable of detecting and isolating all faults on those elements. These elements shall have breaker failure protection, but breaker failure protection need not be duplicated. Both protection systems shall initiate breaker failure protection;

1.3.1.2. to reduce the risk of both systems being disabled simultaneously by a single contingency, the protection system designs shall not use components common to the two systems;

1.3.1.3. the use of two identical protection systems is not generally, recommended, because it increases the risk of simultaneous failure of both systems due to design deficiencies or equipment problems;

1.3.1.4. the protection systems shall be designed to isolate only the faulted element. For faults outside the protected zone, each protection system shall be designed either not to operate or to operate selectively in coordination with other protection systems;

1.3.1.5. Customer protection settings for protections affected by conditions on the transmission system shall be coordinated with those of the transmission system;

1.3.1.6. protection systems shall not operate to trip for stable power swings following contingencies that are judged by protection system designers as not harmful to the transmission system or its Customers;

1.3.1.7. the components and software used in all protection systems shall be of proven quality for effective utility application and following good utility practice;

1.3.1.8. critical features associated with the operability of protection systems and the high voltage interrupting device (HVI) shall be annunciated or monitored;

1.3.1.9. the design of protection systems shall facilitate periodic testing and maintenance. Test facilities and procedures shall not compromise the independence of the redundant protection systems. Test switches shall be used to eliminate the need to disconnect wires during testing;

1.3.1.10. the two protection systems shall be supplied from separate secondary windings on one voltage transformer or potential device and from separate current transformer secondary windings, i.e., from two separate current transformers;

1.3.1.11. separately fused and monitored DC sources shall be used with the two protection systems. For all generating Facilities connected to the transmission system, two separate DC station battery banks shall be required to provide the required degree of reliability; and

1.3.1.12. protection system circuitry and physical arrangements shall be designed to minimize the possibility of incorrect operations from personnel error.

1.3.2. Specific protection and control practices and equipment requirements are set out in Schedule G of this Agreement.

1.3.3. Transmitters and Customers should apply protection systems, using the typical tripping matrix for transmission system protection shown in Exhibit E.2, of this Schedule E.

1.4. Insulation Coordination

1.4.1. Equipment connected to the transmission system shall be protected against lightning and switching surges. This shall include station shielding against direct lightning strokes, surge protection on all wound devices, and cable/overhead interfaces.

1.4.2. A tap connected to a shielded transmission circuit shall also be shielded.

1.4.3. The Transmitter shall review surge arrester ratings.

1.4.3.1. The Transmitter shall provide all relevant Information, e.g., ratings, to Customers upon request. The Transmitter, however is not responsible for the adequacy of design or correctness of the operation of any equipment or apparatus including the surge arrester(s).

1.5. Grounding

1.5.1. Grounding installations shall be capable of carrying the maximum foreseeable fault current, for the duration of such fault currents, without risking safety to personnel that may be present on site when a fault occurs, damage to equipment, or interference with the operation of the transmission system.

1.5.2. Each transformer, switching, or generating station shall have a ground grid on which all metallic structures, metallic equipment and non-energized metallic equipment are solidly connected. The size, type and requirements for the ground grid are site-specific, depending on such factors as soil conditions, station size, and short-circuit level.

1.5.3. The Transmitter shall review the ground potential rise (GPR) study submitted by the Customer at the Customer's cost. The Customer shall comply with the Bell System Practices as they may be amended or modified from time to time and the IEEE standard 487 as it may be amended or modified from time to time for providing special high-voltage protection devices on metallic communication cables. The Transmitter assumes no responsibility for the adequacy of design or correctness of the operation of any equipment or apparatus associated with the Customer's installation.

1.5.4. The placement of any additional grounding points on the transmission system shall require the approval of the Transmitter. The Transmitter shall give its approval if it is satisfied that the reliability of its transmission system is not affected.

1.6. Telemetry, Monitoring, and Telecommunications

1.6.1. Transmitters shall advise Customers of the performance and details of required telemetering facilities that serve them. Some requirements depend on the size and specific location of the connection to the transmission system. As a minimum, telemetry shall be required for the flow of real and reactive power through circuits

and transformers, the voltages at selected points, and the status (open or closed) of switching elements.

1.6.2. A Transmitter may require a Customer to install monitoring equipment to track the performance of its facilities, identify possible protection system problems, and provide measurements of power quality. The responsibility for costs will be as determined by the Board. As required, the monitoring equipment shall perform one or several of the following functions:

1.6.2.1. sequence of events recording (SER) to record protection related events at a connection;

1.6.2.2. digital fault recording (DFR) to permit analysis of transmission system performance under normal and abnormal conditions; or

1.6.2.3. power quality monitoring (PQM) to record voltage transient surges, voltage sags and swells, voltage unbalance, supply interruptions, frequency variations and other voltage and current waveform monitoring.

1.6.3. Customers' telecommunications facilities shall be compatible with those of the Transmitter and have similar reliability and performance characteristics. At the Transmitter's discretion, some or all of the following functions may require telecommunication: protective relaying; system control and data acquisition (SCADA); voice communication; and special protection systems (e.g., generation rejection or runback).

1.6.4. Telecommunication facilities, design details, and performance requirements, associated with Customers' facilities, shall be provided at the Customer's expense.

1.6.5. The Customer shall bear all costs, without limitation, of providing the same telemetry data required under the Market Rules, associated with its facilities to the Transmitter and providing all required connection inputs to the Transmitter's disturbance-monitoring equipment, except:

1.6.5.1. where the connection inputs to the Transmitter's disturbance-monitoring equipment are of mutual benefit to the Customer and the Transmitter, in which circumstance the Customer and Transmitter shall share the cost of providing the data in proportion to the benefits received; or

1.6.5.2. where the connection inputs to the Transmitter's disturbance-monitoring equipment are required only for the Transmitter's benefit, in which case the transmitter shall pay all of the costs associated with providing the data.

1.7. Inspecting and Commissioning Procedures

1.7.1. Customers shall ensure that any new or replacement equipment that they own is inspected and tested before initial connection to the transmission system. The

initial verification tests shall confirm that the connection of the Customer's facility to the transmission system:

1.7.1.1. does not pose any safety hazards;

1.7.1.2. does not adversely affect operation of the transmission system in a material manner; and

1.7.1.3. does not violate any requirement of the Code or this Agreement.

1.7.2. The Transmitter has the right to inspect the Customer's facility and witness commissioning tests related to any new or replacement equipment that could reasonably be expected to adversely affect the transmission system. The initial verification shall include high-voltage interrupting devices, line disconnect switches, the line and bus connections from the dead-end structure to Customer's facility, power transformers, surge arresters, DC batteries, and station service systems, protection, metering, and communication systems. The Customer shall have the right to the inspection reports relating to such facility.

1.7.3. The Transmitter assumes no responsibility for the adequacy of design or correctness of the operation of any equipment or apparatus associated with the Customer's installation. The Transmitter shall notify the Customer of its findings regarding any potential problems or limitation of such equipment or apparatus owned by the Customer, without any responsibility.

1.7.4. The Customer shall advise the Transmitter of the commissioning program in writing, thirty business days before it proposes to begin the commissioning tests. The written notice shall include the connection commissioning schedule, the proposed test procedure, the test equipment to be used, and the transmission system conditions required, and also the name of the individual responsible for coordinating the proposed tests on the Customer's behalf.

1.7.5. Within fifteen business days of receiving the notice, the Transmitter shall notify the Customer that it:

1.7.5.1. agrees with the proposed connection commissioning program and test procedures; or

1.7.5.2. requires changes in the interest of safety or maintaining the reliability of the transmission system, and that such changes shall be sent to the Customer promptly.

1.7.6. If the Transmitter requires changes, then the Parties shall act in good faith to reach agreement and finalize the commissioning program within a reasonable period.

1.7.7. The Customer shall submit the results of the commissioning tests to the Transmitter and must demonstrate that all its equipment complies with the Code and this Agreement.

1.7.8. If the commissioning test reveals non-compliance with one or more requirements of the Code or this Agreement, the Customer whose equipment was tested shall promptly meet with the Transmitter and agree on a process aimed at achieving compliance.

1.7.9. The Transmitter may withhold permission to complete the commissioning and subsequent connection of the Customer to the transmission system if the relevant equipment fails to meet any technical requirement stipulated in the Code or this Agreement.

1.7.10. All reasonable costs incurred or associated with Transmitter's witnessing of the verification tests shall be borne by the Customer.

1.8. Procedures for Maintenance and Periodic Verification

1.8.1. The Transmitter, using good utility practice, may specify the maintenance criteria and the maximum time intervals between verification cycles for those parts of Customers' facilities that may materially adversely affect the transmission system. The obligations for maintenance and performance re-verification shall be stipulated in the appropriate schedule to this Agreement.

1.8.2. Test switches shall be provided to isolate current and potential transformer input to the relays as well as a set of switches to isolate the relays tripping outputs from the power equipment control circuitry.

1.8.3. The reasonable cost of conducting maintenance and verification tests shall be borne by the Customer.

1.8.4. The Transmitter may appoint a representative to witness relevant maintenance and verification tests and the Customer shall permit the representative to be present while those tests are being conducted.

1.8.5. To ensure that the Transmitter's representative can witness the relevant tests, the Customer shall submit the proposed test procedures and a test schedule to the Transmitter not less than ten business days before it proposes to carry out the test. Following receipt of the request, the Transmitter may delay for technical reasons the testing for as long as ten business days. The Transmitter will use best efforts to make the required test date.

1.8.6. The reasonable costs associated with the witnessing of verification tests by the Transmitter's representative shall be borne by the Customer.

1.8.7. If a verification test reveals that the electrical equipment or protective relay system covered under the operations schedule does not comply with requirements, the Customer shall:

1.8.7.1. promptly notify the Transmitter of that fact;

1.8.7.2. promptly advise the Transmitter of its proposed remedial steps and its timetable for their implementation;

1.8.7.3. diligently undertake appropriate remedial work and provide the Transmitter with monthly reports on progress; and

1.8.7.4. conduct further tests or monitoring on completing the remedial work, to confirm compliance with the relevant technical requirements.

1.8.8. The Transmitter's reasonable costs associated with witnessing the performance tests following remedial work shall be borne by the Customer.

1.8.9. Customers shall make their maintenance records and verification test results, including up-to-date as-built drawings, available to the Transmitter upon request.

SCHEDULE E (CONT'D)

Exhibit E.1 Protection System Symbols and Devices

Protection Systems - Symbols and Device Functions

51B	Transformer Phase Backup
50 / 51	Instantaneous / Timed Overcurrent
51V	Voltage Controlled Overcurrent
64	Line Ground Protection
79-25	Synchronizing Relay
A21 / B21	Line Phase Protection - A&B Group
A27 / B27	Undervoltage - A&B Group
A59 / B59	Overvoltage - A&B Group
A64-27 / B64-27	Ground Undervoltage - A&B Group
A64-59 / B64-59	Ground Overvoltage - A&B Group
A81U / B81U	Underfrequency - A&B Group
A81O / B81O	Overfrequency - A&B Group
A87 / B87	Transformer Differential - A&B Group
F	Failure Protection
L1, L2	Supply Line
T1, T2	Power Transformer
RT/TT	Remote or Transfer Trip for HVI Device Failure Protection
	Circuit Breaker
	Circuit Breaker with Reclosure
	HV Interrupting Device a) Circuit Breaker b) Circuit Switcher c) Vacuum Interrupter
	Motor Operated Disconnect Switch
	HV Transformer Bushing
	LV Transformer Bushing

SCHEDULE E (CONT'D)

Exhibit E.2 Typical Transmission System Protection Tripping Matrix

The following is a simplified tripping matrix showing the breakers that trip for different protection systems on the transmission system based on a single line supply to a Customer station or a transmitter's tapped transformer station operating, at the high voltage side, above 50 kV 50kV. The type of Customer (i.e., load or Generator) station configuration and other site-specific factors will influence the desired tripping matrix. The same approach can be applied to large 44-kV developments. In some applications, it may be desirable to trip the MV breaker for Line ZI/T operations instead of the HV Breaker.

	INITIATING PROTECTION							
PROTECTION FUNCTION	LINE ZI	LINE ZT	T T R LOCAL	XFRM	BUS	B/F HV	FRAME LEAK *	B/F MV
TRIP HV BREAKERS	T	T		T	T	T	T	T
HV BREAKER FAILURE	I	I		I	I			
HV AUTO-RECLOSE	C	C		C	C	C	C	C
TRIP MV BREAKERS			T	T	T	T	T	T
MV BREAKER FAILURE			I	I	I		I	
MV AUTO-RECLOSE					C	C	C	C
TTT	S					S	S	
OPEN XFR DISC				I				
TRIP ADJACENT HV ZONES						I		
TRIP ADJACENT MV ZONES								I

T – trip breakers
I – initiate
C – cancel
S – send signal
HV – high voltage

TTR/T – transfer trip receive/transmit
ZI/T – impedance instantaneous/timed
B/F – breaker failure
MV – medium voltage

* - Frame leakage protection is normally associated with 500kV breakers

All transmission system elements, including breakers, in the zones of protection shall be fitted with redundant protection systems if devices operated at more than 50 kV, except as noted.

All breakers in the zone of protection that includes devices operated at more than 50 kV shall be fitted with the non-redundant breaker failure-protection systems. Transmission system reliability, as determined by the IESO, may require breaker failure protection on the transformer MV breaker.

The Customer must be able to isolate (self-contain) his internal problems without having a major impact on the transmission system. Under certain circumstances, HV breakers may not be required for load Customer step-down transformers, provided that a motorized disconnect switch

and redundant communication channels and paths are provided to isolate the transformer at the terminal stations if a fault occurs in the transformer zone of protection.

Medium-voltage buses require either duplicated differential protection or a single differential protection with an overcurrent backup.

SCHEDULE F

ADDITIONAL TECHNICAL REQUIREMENTS

1.1 Supply Considerations

1.1.1 A high-voltage interrupting device (HVI) shall provide a point of isolation for the Generator's station from the transmission system. HVIs shall be provided with appropriate back-up protection. The HVI shall be a circuit breaker unless the Transmitter authorizes another device.

1.1.2 The HV side of the Generator's transformer shall be protected by surge arresters.

1.1.3 All protection systems shall be redundant and be complete with separate trip auxiliary relays and separately fused DC supplies.

1.1.4 The standard transformer winding connection for large Generators is LV delta – HV wye. Any other winding connections shall require the approval of the Transmitter. The Transmitter shall give its approval if it is satisfied that the reliability of its transmission system is not affected.

1.1.5 The method of grounding the neutral of all power transformer primary windings shall require the approval of the Transmitter. The Transmitter shall give its approval if it is satisfied that the reliability of its transmission system is not affected.

1.2 Typical Generator Protection

1.2.1 The typical technical requirements for Generator protection should be followed, as set out in Exhibit E.1 of Schedule E and Exhibits F.1 and F.2 of this Schedule F.

1.2.2 The typical Generator protections used are shown in Exhibit F.3 of this Schedule F.

1.3 Protection against Internal Faults

1.3.1 The Generator shall provide a protection package to detect and isolate faults on its equipment as required by the Transmitter to respect the stability and reliability of the transmission system, equipment ratings, and safety requirements.

1.3.2 Transmission system reliability may require two transformer differential protections (A87, B87) and low-voltage breaker failure protection, as shown in Exhibit F.2 of this Schedule F.

1.3.3 When two transformer differential protections are not required, one transformer differential and one overcurrent protection shall suffice. The timing of this overcurrent protection shall not exceed 1.6 seconds. The Customer shall coordinate all its internal overcurrent protections.

1.4 Protection against External Faults

1.4.1 The technique used for ground detection varies according to and depends on the type of winding configuration chosen for the power transformer.

1.4.1.1 if the transformer is connected ungrounded wye or delta on the primary, then ground undervoltage (64-27) and ground overvoltage (64-59) protections as shown in Appendix 11 are required to detect ground faults.

1.4.1.2 where the Transmitter has accepted a solidly grounded wye connection on the primary (Yg/D or Yg/Yg), ground overcurrent (64) protection(s) in the transformer neutral may be used to detect ground faults, as shown in Exhibit G.2 of Schedule G.

1.4.2 Typical protections that may be installed are: Distance Instantaneous and Timed (21), Phase Directional Overcurrent (67), Voltage Restrained Overcurrent (51V), Overcurrent (50/51), and Undervoltage (27), as shown in Exhibits F.1 and F.2 of this Schedule F.

1.4.3 To provide reliable phase-fault detection, the timed distance protection shall overreach the apparent impedance of the transmission line.

1.4.4 A remote/transfer trip system may be required to trip one or more breakers at the Generator's station or to trip breakers at a remote station.

1.4.4.1 generator protections that initiate opening of the remote supply breakers on the transmission system shall at the same time initiate opening of the main transformer high-voltage disconnect switch or line disconnect switch.

1.4.4.2 a signal that opens remote breakers on the transmission system shall be automatically removed when the main transformer disconnect switch or line disconnect switch opens. The signal shall only "seal-in" if the disconnect switch fails to open.

1.4.4.3 for DC remote tripping or transfer tripping, Generators shall provide all necessary equipment associated with two monitored teleprotection channels of adequate conductance between the Customer's station and one of the Transmitter's terminal stations or tapped stations. Normally two circuits in the same cable would be acceptable, but to satisfy transmission system requirements, two separate cables following separate routes may be required. Generators shall use relays and associated equipment following

good utility practice guidelines and are compatible with the Transmitter's remote trip or transfer trip equipment.

1.4.5 The protective setting to detect islanding/abnormal condition for smaller Generators shall be different from that used for larger Generators.

1.4.5.1 protections that may be required to detect islanding/abnormal conditions include, but are not limited to, Overvoltage (59), Undervoltage (27), Voltage balance (60), Overfrequency (81 O), and Underfrequency (81 U), as shown in Exhibits F.1 and F.2 of this Schedule F.

1.4.5.2 the frequency-protection settings on larger generating units shall coordinate with the provincial load-shedding system and with requirements of reliability organizations.

1.4.6 Blocking relays (21 BL) with remote signal-sending auxiliaries at the generating station and receiving auxiliaries at the transmission (terminal) station(s) may be required to prevent the Transmitter's distance relays from operating due to faults on the Generator's low-voltage bus. Communication media between the stations, similar to a single remote/transfer trip channel, would then be required for the blocking system, to prevent incorrect relay operation for this condition.

1.5 Autoreclosure and Manual Energization

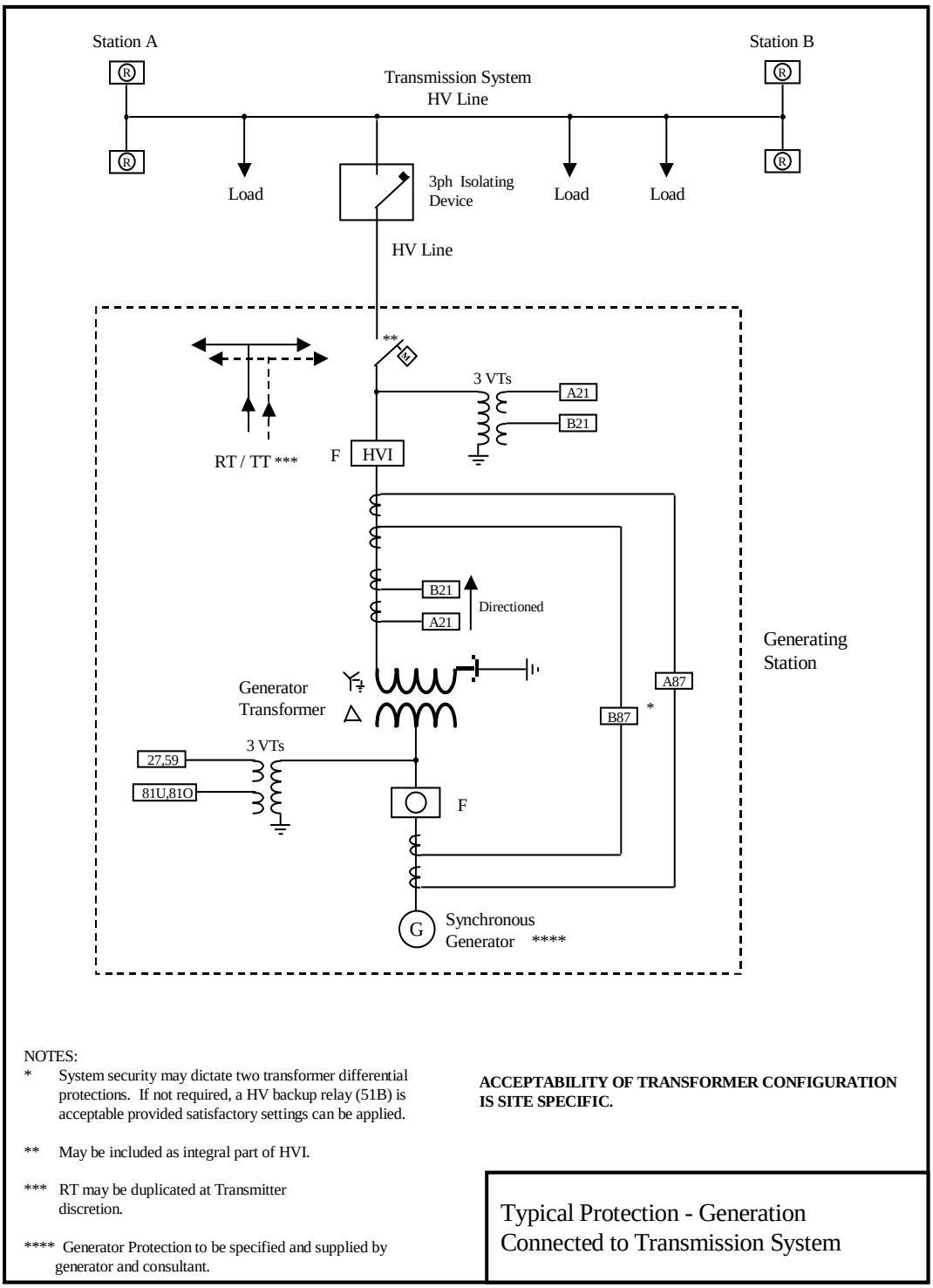
1.5.1 The Generator shall provide suitable equipment to protect its plant and equipment for any conditions on the transmission system such as reclosing, faults, and voltage unbalance.

1.5.2 Following a protection operation on a transmission line, the transmission breakers, located mainly in network switching and/or transformation stations, shall autoreclose after a certain time delay. Where the Generator is directly connected to the transmission line, or for configurations where the Generator could be damaged by autoreclosure of the line, the Generator shall provide a reliable means of disconnecting its equipment before autoreclosure. The Generator is responsible for protecting its own equipment and the Transmitter is not liable for damage to the Generator's equipment except as stipulated in section 15 of this Agreement. The Generator may request a means of supervising the transmission autoreclosure prior to the disconnection of its equipment e.g. changes in protection logic at one or both stations to reduce the risk of such events. The criteria governing the use of reclosures are set out in the Ontario Hydro "Policies, Principles & Guidelines" document "C-3.4.1(R1), Automatic Reclosure and Manual Energization on Bulk System Electricity Circuits", which was in effect as of April 1, 1999.

1.5.3 A Generator's transmission system breaker shall not autoreclose without the Transmitter's approval.

1.5.4 Manual energization of a Transmitter's line by a Generator's facilities is permitted only under the Transmitter's direction.

EXHIBIT F.1 TYPICAL GENERATOR PROTECTION REQUIREMENTS



NOTES:

* System security may dictate two transformer differential protections. If not required, a HV backup relay (51B) is acceptable provided satisfactory settings can be applied.

** May be included as integral part of HVI.

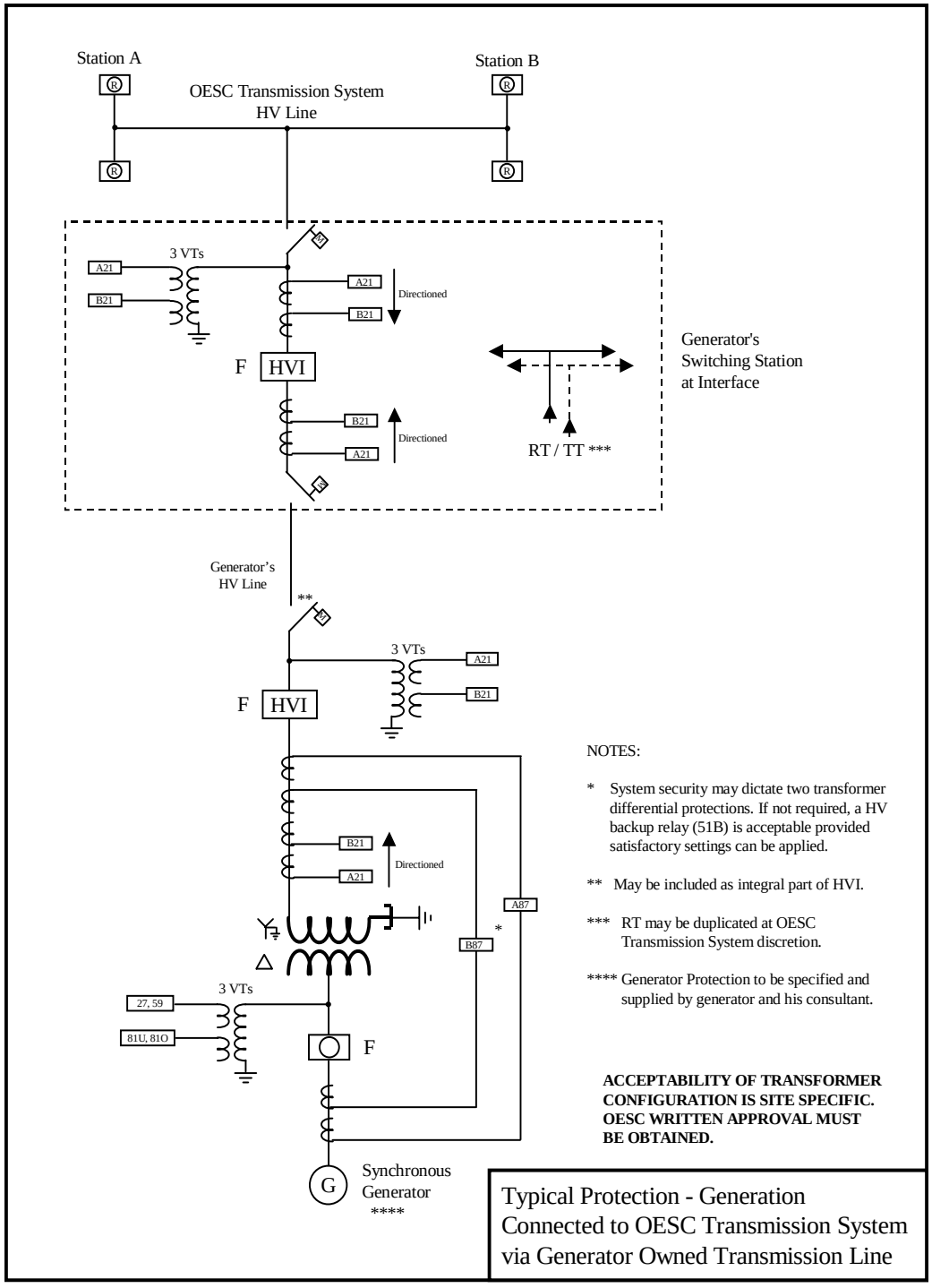
*** RT may be duplicated at Transmitter discretion.

**** Generator Protection to be specified and supplied by generator and consultant.

ACCEPTABILITY OF TRANSFORMER CONFIGURATION IS SITE SPECIFIC.

Typical Protection - Generation Connected to Transmission System

EXHIBIT F.2 TYPICAL GENERATOR-OWNED TRANSMISSION LINE PROTECTION REQUIREMENTS



SCHEDULE F (CONT'D)

EXHIBIT F.3 TYPICAL GENERATOR PROTECTIONS

The following are typical Generator protections. The actual ones are to be specified and supplied by the Generator and his consultants. The Transmitter will be interested in the capabilities and settings of the frequency protections and voltage protections. The settings of the frequency protections on large units must comply with NPCC performance requirements. All protections settings must be submitted to the Transmitter and the IESO.

Typical Protections

Thermal Units	Protections	Hydraulic Units	Protections
Differential	A87,B87	Differential	A87,B87SP
Stator Ground	A64N,B64N	Stator Ground	A64N,B64N
Loss of Excitation	A40,B40	Loss of Excitation	B40
Phase Unbalance	A46,B46	Phase Unbalance	A46
Over/under frequency	B81H,B81L	Overvoltage	A59
Over/under excitation	A59H,A59L	Phase Backup	B21B
Out-of-step	B21	Over/under frequency	B81H,B81L
Low Forward Power	A32,B32	Condense-to-Generate	B81-83
Sup Start Phase	A50S		
Sup Start Ground	A64S		
U/F Supervision	A81S		
Speed Switch	A14S		

SCHEDULE G

PROTECTION SYSTEM REQUIREMENTS

1.1. Telecommunications

1.1.1. The telecommunication facilities, used for protection purposes, shall have a level of reliability consistent with the required performance of the protection system.

1.1.2. Transmitters shall specify telecommunication channel media and protective systems.

1.1.3. Telecommunication circuits used for the protection and control of the transmission system shall be dedicated to that purpose.

1.1.4. Where each of the dual protections protecting the same system element requires communication channels, the equipment and channel for each protection shall be separated physically and designed to minimize the risk that both protections might be disabled simultaneously by a single contingency.

1.1.5. Telecommunication systems shall be:

1.1.5.1. designed to prevent unwanted operations such as those caused by equipment or personnel;

1.1.5.2. powered by the station's batteries or other sources independent from the power system; and

1.1.5.3. monitored in order to assess equipment and channel readiness.

1.1.6. Major disturbances caused by telecommunication failures shall have annual frequency of less than 0.002 per year from the dependability aspect and less than 0.002 per year from the security aspect.

1.1.7. Telecommunication protection for a single transmission system circuit shall have an unavailability less than forty two (42) minutes per year, and for two circuits it shall be less than four (4) minutes per year.

1.1.8. The telecommunication false-trip rate used as part of a protection system for a single transmission system circuit shall be not more than 0.1 false trips per year, and for two circuits it shall be not more than 0.001 false trips per year.

1.1.9. Total transmission system circuit trips coincident with telecommunications failure shall be not more than 0.001 per year.

1.2. Test Schedule for Relaying Communication Channels

1.2.1. Communication channels associated with protective relaying shall be tested at periodic intervals to verify that the channels are operational and that their characteristics lie within specific tolerances. The testing consists of signal adequacy tests and channel performance tests.

1.2.1.1. Signal adequacy test intervals are:

1.2.1.1.1. Channels - for Protection (unmonitored) at one (1)-month intervals; and

1.2.1.1.2. Channels - for Protection (monitored) at twelve (12)-month intervals.

1.2.1.2. Channel performance testing on leased communication circuits shall be conducted at 24-month intervals, while intervals for testing power line carrier equipment shall be equipment-specific.

1.3. Verification and Maintenance Practices

1.3.1. Customers shall perform routine verifications of protection systems on a scheduled basis in accordance with applicable reliability standards. The maximum verification interval is four years for most 115-kV elements, most transformer stations, and certain 230-kV elements and two years for all other high- voltage elements. All newly commissioned protection systems shall be verified within six months of the initial in-service date of the system.

1.3.2. Routine verification shall ensure with reasonable certainty that the protections respond correctly to fault conditions.

1.3.3. An electrically initiated simulated-fault clearing check is mandatory to verify new protections, after any wiring or component changes are made to a protection, and for routine verification of a protection.

1.3.4. Customers shall ensure that the functional testing of protection and metering can be properly performed and that all verification readings are obtainable.

1.3.5. The Transmitter shall co-ordinate the initial verification upon receipt of the approved and final set of drawings. The initial verification shall be used during the final commissioning phase of the station and shall be used as a basis for future periodic verifications.

1.3.6. Transmitters and Customers shall agree upon the final functional test procedures before the tests begin. If they cannot agree, the supply or continuity of supply shall depend on the performance of the tests that the Transmitter shall require.

1.3.7. Before the initial functional tests are performed, the Customer shall supply the Transmitter with written documentation that shall readily provide confirmation that appropriate verifications have been completed and that all calibrations, tests, etc., have been performed. For components that may affect the transmission system (such as relays, meters, etc.), the Customer must satisfy the Transmitter that the proper settings have been applied.

1.3.8. Customers shall make available to the Transmitter records of relay calibrations and protection verifications, so that records of the facility's performance can be maintained. The specific records required shall be identified in this Agreement.

1.4. Functional Tests and Periodic Verification

1.4.1. Upon verification that the Customer's static tests on protection and control equipment, outlined in the Code and this Agreement, have been satisfactorily completed, a series of tests shall be performed with the equipment in a dynamic mode. These tests shall ensure that the equipment performs correctly when it should and also that it will not operate improperly.

1.4.2. These tests are here described only in general terms, since the specific tests to be performed will differ depending on the particular station configuration, the components or equipment used, and the design philosophy of the circuitry.

1.4.3. For DC circuitry checks, the logic of the auxiliary circuitry shall be thoroughly checked with the DC applied and the initiating devices suitably energized to initiate the process. When primary relays are the initiating device, the initiation shall be achieved by secondary injection of appropriate electrical quantities to the measuring elements. In certain cases where the sequence of operation is critical, monitoring by a portable sequence-of-events recorder may be required for proper analysis. Operation/tripping of all interrupting/isolating devices shall always be verified, as well as annunciation and target operation.

1.4.4. "On potential" checks shall follow all necessary preliminary procedures. The main equipment shall be energized but not placed on load. The Customer shall check all readings of potentials, including determination of correct phasing/phase rotation. The test must also demonstrate that all equipment performs as expected when energized and is in condition to have primary load applied.

1.4.5. Customers shall make "On-Load" checks following the application of appropriate load, voltage, current, phase angle or crossed wattmeter readings at the appropriate instrument transformer outputs or protection input points, to ensure that all quantities are appearing as required with respect to magnitude, phase relation, etc. These checks are to determine

that relays are properly connected and that the watt and var checks of all indicating and referenced equipment are correct. At times it may be necessary to repeat some or all tests, e.g., relay performance, using load currents.

1.5. Failure Protection for High-Voltage Interrupting Devices (HVIs)

1.5.1. Provisions shall be made to clear the fault in case the HVI fails to isolate the fault. The requirements for HVI failure protection vary depending on the maximum permissible fault duration and the location of the connection on the transmission system. Some portions of the transmission system are designed and operated to more stringent requirements to avoid adversely affecting neighbouring transmission systems.

1.5.2. In general, the transmission system will require the HVI failure protection to be achieved by using remote or transfer trip circuits.

1.5.3. In portions of the transmission system having less stringent requirements, the HVI failure protection may be achieved by opening the motor-operated disconnect switch. If the disconnect switch experiences a flashover, the line protection at the transmission station(s) shall operate to isolate the fault.

1.5.4. Automatic ground switches are not acceptable for any new installations for triggering line protection operation following the failure of a HVI.

1.5.5. When circuit switchers are used, the interrupter and disconnect switch shall operate independently. Protections that trip the interrupter shall simultaneously initiate opening of the disconnect switch.

1.5.6. The DC voltage supplied to the interrupter and disconnect switch shall be fed from separately fused and monitored DC supplies: that is, by two (2) DC cables to the control cabinet.

1.6. Instrument Transformers

1.6.1. Current transformer output shall remain within acceptable limits for all anticipated fault currents and for all anticipated burdens connected to the current transformer.

1.6.2. Current transformers shall be connected so that adjacent relay protection zones overlap.

1.6.3. Voltage transformers and potential devices shall have adequate volt-ampere capacity to supply the connected burden while maintaining their accuracy over the specified primary voltage range.

1.6.4. For each independent protection system, separate current and voltage transformer or potential device secondary windings shall be used, except on low-voltage devices.

1.6.5. Interconnected current transformer secondary wiring and voltage transformer secondaries shall each be grounded at only a single point.

1.7. Battery Banks and Direct Current Supply

1.7.1. The Customer shall ensure that if either the battery charger fails or the AC supply source fails, the station battery bank shall have enough capacity to allow the station to operate for at least eight hours for a single battery system or at least six hours for each of the batteries in a two battery system.

1.7.2. Critical DC supplies shall be monitored and annunciated such as relay protection circuits and high voltage interrupters (HVIs).

1.7.3. For all generating facilities connected to the transmission system, two separately protected (fuse/breaker) and monitored DC station battery systems are required.

1.7.4. For tap transformer stations, one protected (fuse/breaker) monitored DC station battery system is required unless two systems are specified by the Transmitter.

1.7.5. Where two battery systems are required, there shall be a battery transfer scheme.

1.7.6. Where the use of a single battery system is allowed, the following conditions shall be met:

1.7.6.1. it can be tested and maintained without removing it from service;

1.7.6.2. each protection system shall be supplied from physically separated and separately fused direct current circuits; and

1.7.6.3. no single contingency other than failure of the battery bank itself shall prevent successful tripping for a fault.

SCHEDULE H
FACILITIES DEEMED COMPLIANT

H.1. IDENTITY OF DEEMED COMPLIANT FACILITIES

H.1.1. The following Customer facilities are deemed compliant in accordance with section 4.6.1 of the Code:

[to be completed by the Parties, including identity of the facilities and the extent of non-compliance]

H.1.2. The following Transmitter's transmission facilities are deemed compliant in accordance with section 4.6.1 of the Code:

[to be completed by the Parties, including identity of the facilities and the extent of non-compliance]

H.2. COMING INTO COMPLIANCE

H.2.1. The Transmitter may, where the Board has approved its rules and procedures referred to in section 4.6.3 of the Code, require that some or all of the Customer's facilities to which section 4.6.1 of the Code applies be brought into actual compliance with the basic general performance standards and technical requirements set out in the Code, including in Appendix 2. The Transmitter may impose this requirement in relation to such facilities whether or not they are identified in section H.1.1. The Transmitter may impose this requirement only:

(a) in relation to that portion of the Customer's facilities in respect of which the Transmitter has made a determination referred to in section 4.6.2 of the Code; and

(b) in accordance with the Transmitter's Board-approved rules and procedures referred to in section 4.6.3 of the Code.

H.2.2. The Customer shall, upon being required by the Transmitter to do so under section H.2.1, bring its facilities into actual compliance with the basic general performance standards and technical requirements set out in the Code, including in Appendix 2, to the extent required by the Transmitter and in accordance with the rules and procedures referred to in section H.2.1(b). Responsibility for the costs of bringing such facilities into actual compliance shall be determined in accordance with the Transmitter's Board-approved rules and procedures referred to in section 4.6.3 of the Code.

H.2.3. Where Customer facilities are brought into actual compliance under section H.2.2, the Parties shall amend section H.1.1 as required.

H.2.4. Where the Transmitter's transmission facilities are brought into actual compliance, the Parties shall amend section H.1.2 as required.

SCHEDULE I

EXCHANGE OF INFORMATION

I.1. INFORMATION TO BE PROVIDED BY THE TRANSMITTER

I.1.1. Subject to section I.1.2, the Transmitter shall, at the Customer's request, provide the following information to the Customer provided that such information is available at the relevant time:

(a) feeder amperes per phase;

(b) bus voltage;

(c) real and reactive power flow per feeder (where available; otherwise per bus level);

(d) feeder breaker open/close status;

(e) feeder breaker recloser blocked/not blocked status;

(f) bus tie breaker open/close status;

(g) capacitor bank breaker open/close status; and

(h) transformer/bus breaker open/close status.

I.1.2. The Customer shall be entitled to the information referred to in section I.1.1 only to the extent that:

(a) the information relates specifically to the connection of its own facilities;

(b) the information is relevant to the connection of its own facilities; and

(c) the Transmitter is not prohibited by its confidentiality obligations as set out in the Code or its licence from providing that information to the Customer.

I.1.3. The Transmitter shall provide the Customer with the following additional information:

(a) at the Customer's request, a "relay and breaker trip report" for any operation of a breaker or transfer trip relay and that includes the date and time of the breaker or transfer trip operation and reclose or close, the cause of the incident if known and the quantity of load lost;

(b) megawatt and megavar readings, excluding revenue-metered quantities; and

(c) [any additional information items as determined by the Parties to be required based on site specific considerations]

I.1.4. A Transmitter may provide information under section I.1.1 or I.1.3 by means of posting the information on a website that is dedicated to the Customer.

I.2. INFORMATION TO BE PROVIDED BY THE CUSTOMER

I.2.1. To the extent that it has not already been provided to the Transmitter, the Customer shall provide the Transmitter with the same technical information provided to the IESO during any connection assessment and facility registration process associated with the Customer's facilities or any new, modified or replacement Customer Facilities. Such information shall be provided in the form outlined in the connection assessments section on the IESO's public website.

I.2.2. The Customer shall provide the Transmitter with updated versions of the technical information referred to in section I.2.1 in the event of a material change in such information.

I.2.3. The Customer shall provide the Transmitter with such information as the Transmitter may reasonably require in order to perform a Customer Impact Assessment.

I.2.4. To the extent that it has not already been provided to the Transmitter under another section of this Agreement or is not reasonably expected to already be known by the Transmitter, the Customer shall provide the Transmitter with the date and time at which the Customer's facilities are connected or reconnected to, or disconnected from, the Transmitter's transmission facilities.

I.2.5. The Customer shall notify the Transmitter in the event that its facilities are not being operated or maintained in accordance with the requirements of this Agreement.

I.2.6. The customer shall provide the Transmitter with the following additional information:

(a) the date and time at which any of the Customer's supply circuit breakers or high voltage interrupting switches automatically trips;

(b) information pertaining to the operation of any of the Customer's automatic protective relays that has an impact on the Transmitter's transmission facilities;

(c) changes in the Customer's operating setup or operating diagrams relative to the information contained in Schedule A or any updates or amendments thereto;

(d) at the Transmitter's request, line and load data required for protective relay settings;

(e) at the Transmitter's request, protective relay settings on equipment protection systems; and

(f) at the Transmitter's request, annual facility performance data as may be required to enable the Transmitter to meet its reporting obligations to any reliability organization.

I.3. INFORMATION TO BE PROVIDED BY EITHER PARTY

I.3.1. Each Party shall provide the other with the following information:

(a) any temporary or permanent changes in the configuration of the Party's facilities that may affect the security of those facilities, load distribution, protective relay settings or other parameters;

(b) details of defective equipment or hazardous conditions that may become known to the Party's Controlling Authority but not to the Controlling Authority of the other Party;

(c) planned changes in the Party's facilities that affects the operation of those facilities; and

(d) such other information as the other Party may reasonably require for the purpose of fulfilling its obligations under this Agreement.

I.3.2. Where applicable, the Parties shall amend Schedule A to reflect any information provided by a Party to the other under this Schedule.

SCHEDULE J
CONTACTS FOR PURPOSES OF NOTICE

[To be completed by the Parties]

SCHEDULE K
SPECIAL PROVISIONS

K.1. LIABILITY

K.1.1. Despite section 15.1.2 but subject to sections K.1.2 and K.1.3, where the Customer uses the Transmitter's breakers as HV interruption devices or for the purpose of synchronizing the Customer's facilities to the Transmitter's transmission system, the Transmitter shall not be liable to the Customer for any damage arising out of such use, even where such damage is arises out of the negligence or wilful misconduct of the Transmitter.

K.1.2. Subject to section K.1.4, where damage occurs to the Customer's main output transformer ("MOT") due to the negligence or wilful misconduct of the Transmitter, the Transmitter shall be liable to the Customer in an amount equal to:

(a) the cost of repairing the MOT; or

(b) the cost replacing the MOT,

whichever is the lower.

K.1.3. Subject to section K.1.4, where damage occurs to the Customer's electrical equipment upstream of the Customer's MOT but within the powerhouse due to the negligence or wilful misconduct of the Transmitter, the Transmitter shall be liable to the Customer in an amount equal to 45% of the Customer's Party Losses associated with such damage.

K.1.4. In no event shall the Transmitter be liable to the Customer under section K.1.2 or K.1.3 in an amount greater than $25 million for any event of negligence or wilful misconduct by the Transmitter. The Parties agree that this limitation of liability applies whether the damage suffered by the Customer is covered under section K.1.2, section K.1.3 or both.

K.1.5. This section K.1 shall cease to apply in relation to any Party Losses suffered by the Customer that arise out of the negligence or wilful misconduct of the Transmitter on or after the date on which the Customer ceases to use the Transmitter's breakers as HV interruption devices or for the purposes of synchronizing the Customer's facilities to the Transmitter's transmission system.

K.2. CUSTOMER-OWNED BREAKERS

K.2.1. Within five years of the date of coming into force of this Agreement, the Parties shall conduct and complete studies concerning the installation by the Customer of its own breakers for HV interruption and for the purposes of synchronizing the Customer's facilities to the Transmitter's transmission system. The Parties shall then determine whether the installation of additional breakers by the Customer is warranted, and shall advise the Board of such determination.

K.2.2. Responsibility for any incremental costs incurred by the Transmitter as a result of the Customer not having its own breakers for HV interruption or for the purposes of synchronizing the Customer's facilities to the Transmitter's transmission system shall be determined by the Board.

APPENDIX 1

VERSION A - FORM OF CONNECTION AGREEMENT FOR LOAD CUSTOMERS

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APPENDIX 1

VERSION A - FORM OF CONNECTION AGREEMENT FOR LOAD CUSTOMERS

This Connection Agreement is made this ___ day of _____, _____,

BETWEEN

_____, a *[insert form of business organization]* duly *[incorporated/formed/registered]* under the laws of *[insert jurisdiction]* (the "Transmitter")

AND

_____, a *[insert form of business organization]* duly *[incorporated/formed/registered]* under the laws of *[insert jurisdiction]* (the "Customer")

(each a"Party" and collectively the "Parties")

RECITALS

WHEREAS the Customer has connected or wishes to connect its facilities to the Transmitter's transmission system.

AND WHEREAS the Transmitter has connected or has agreed to connect the Customer's facilities to its transmission system.

AND WHEREAS in accordance with its licence and the Market Rules the Transmitter has agreed to offer, and the Customer has agreed to accept, transmission service in relation to the Customer's facilities.

NOW THEREFORE in consideration of the foregoing, and of the mutual covenants, agreements, terms and conditions herein contained, the Parties, intending to be legally bound, hereby agree as follows:

PART ONE
GENERAL

1. DEFINITIONS

1.1 In this Agreement, unless the context otherwise requires:

1.1.1 "Agreement" means this connection agreement and all of the Schedules;

1.1.2. "Code" means the Transmission System Code issued by the Board and in effect at the relevant time;

1.1.3. "Confidential Information" in respect of a Party means (a) information disclosed by that Party to the other Party under this Agreement that is in its nature confidential, proprietary or commercially sensitive and (b) information derived from the information referred to in (a), but excludes information described in section 21.1;

1.1.4. "Controlling Authority" in respect of a Party means the person appointed by that Party as responsible for performing, directing or authorizing changes in the condition or physical position of electrical apparatus or devices;

1.1.5. "Cure Period" means the period of time given to a Defaulting Party for the purposes of remedying a Default, determined in accordance with section 19.2.1;

1.1.6. "Default Notice" has the meaning given to it in section 19.1.1;

1.1.7. "Defaulting Party" means a Party in relation to whom an Event of Default has occurred or is occurring;

1.1.8. "End of Cure Period Notice" has the meaning given to it in section 19.2.3;

1.1.9. "Event of Default" means a Financial Default or a Non-financial Default;

1.1.10. "Export Transmission Service" has the meaning given to it in the Transmitter's Rate Order;

1.1.11. "Financial Default" in respect of a Party means a failure by that Party to pay an amount to the other Party when due under this Agreement, including failure to pay compensation or indemnification for loss or damage agreed to by the Parties or for amounts determined to be owed to a Party as a result of the settlement or resolution of a dispute arising under this Agreement;

1.1.12. "Force Majeure Event" in respect of a Party means any event or circumstance, or combination of events or circumstances: (a) that is beyond the reasonable control of that

Party; (b) that adversely affects the performance by the Party of its obligations under this Agreement; and (c) the adverse effects of which could not have been foreseen and prevented, overcome, remedied or mitigated in whole or in part by the person through the exercise of due diligence and reasonable care, provided however that the lack, insufficiency or non-availability of funds shall not constitute a Force Majeure Event;

1.1.13. "Insolvency/Dissolution Event" in respect of a Party, means any of the following:

(a) in the case of a voluntary insolvency/dissolution, if the Party shall (i) apply for or consent to the appointment of a receiver, receiver/manager, interim receiver, trustee, administrator, or liquidator (or person having a similar or analogous function under the laws of any jurisdiction) of itself or of all or a substantial part of its assets; (ii) be unable, or state or admit in writing its inability or failure, to pay its debts generally as they become due; (iii) make a general assignment for the benefit of its creditors, or make or threaten to make a sale in bulk of all or a substantial part of its assets; (iv) commit an act of bankruptcy under the *Bankruptcy and Insolvency Act* (Canada) or under any existing or future law relating to bankruptcy and insolvency; (v) commence any proceeding or other action under any existing or future law relating to bankruptcy, insolvency, reorganization, or relief of debtors seeking to have an order for relief entered with respect to it, or seeking to adjudicate it bankrupt or insolvent, or seeking reorganization, arrangement, adjustment, moratorium, winding up, liquidation, dissolution, composition, compromise or other relief with respect to it or its debts or an arrangement with creditors, or file an answer admitting the material allegations filed against it in any bankruptcy, insolvency, or reorganization proceeding; or (vi) take any corporate action for the purpose of effecting any of (i) to (v);

(b) in the case of an involuntary insolvency/dissolution, if any proceeding or other action shall be instituted in any court of competent jurisdiction seeking in respect of the Party or of all or a substantial part of its assets (i) an adjudication in bankruptcy or for reorganization, dissolution, winding up or liquidation; (ii) a composition, compromise, arrangement or moratorium with its creditors, or other relief with respect to it or its debts; (iii) the appointment of a trustee, receiver, receiver/manager, interim receiver, administrator or liquidator (or person having a similar or analogous function under the laws of any jurisdiction); or (iv) any other similar relief under any existing or future law relating to bankruptcy, insolvency, reorganization or relief of debtors;

(c) an application is made for the winding up or dissolution or a resolution is passed or any steps are taken to pass a resolution for the winding up or dissolution of the Party, except as part of a bona fide corporate reorganization; or

(d) the Party is wound up or dissolved, except as part of a bona fide corporate reorganization, unless the notice of winding up or dissolution is discharged;

1.1.14. “Lender” in respect of a Customer means a bank or other entity whose principal business is that of a financial institution and that is financing or refinancing the Customer’s facilities;

1.1.15. “Non-defaulting Party” means a Party that is not experiencing an Event of Default;

1.1.16. “Non-financial Default” in respect of a Party means any of the following:

(a) any breach of this Agreement by that Party, other than a breach that constitutes a Financial Default;

(b) the licence (if any) of the Party is suspended, withdrawn or revoked or expires without being replaced; or

(c) an Insolvency/Dissolution Event occurs in relation to the Party;

1.1.17. “Party Losses” means any claims, losses, costs, liabilities, obligations, actions, judgments, suits, expenses, disbursements or damages of a Party, including where occasioned by a judgment resulting from an action instituted by a third party;

1.1.18. “Rate Schedule” means the rates in effect from time to time and the terms and conditions relating to those rates that are approved by the Board in the Transmitter’s Rate Order, including rates for connection service;

1.1.19. “Schedule” means a schedule listed in section 4.2.1 and any additional schedules created by the Parties under section 4.3.1;

1.1.20. “Supporting Guarantee” means operating instructions, such as instructions to open or close a switch or to lock devices in the open position, given to protect the safety of staff and the public while work is being performed by a Party; and

1.1.21. “Work Protection” means a state or condition whereby an isolated or isolated and de-energized condition has been established for work on facilities and will continue to exist, except for authorized tests, until the work relating thereto has been completed.

1.2. In this Agreement, unless the context otherwise requires, each of the following words and phrases shall have the meaning given to it in the Code (whether or not capitalized in the Code or in this Agreement): “assigned capacity”; “available capacity”; “Board”; “business day”; “connect”; “connection facilities”; “connection point”; “connection service”; “contracted capacity”; “circuit breaker”; “emergency”; “facilities”; “fault”; “forced outage”; “good utility practice”; “isolate”; “isolating device”; “licence”; “load shedding”; “maintenance”; “outage”; “planned outage”; “promptly”; “protection system”; “protective relay”; “Rate Order”; “reliability”; “reliability organization”;

"reliability standards"; "renewable generation"; "single contingency"; "site"; "transmission facilities"; "transmission service"; and "work".

2. INTERPRETATION

2.1. Words and phrases contained in this Agreement (whether or not capitalized) that are not defined herein shall have the meanings given to them in the *Electricity Act, 1998,* S.O. 1998, c. 15, Schedule A, the *Ontario Energy Board Act, 1998*, S.O. 1998, c. 15, Schedule B, or in any regulations made under either of those *Acts*, as the case may be.

2.2. Headings are for convenience only and shall not affect the interpretation of this Agreement.

2.3. In this Agreement, unless the context otherwise requires:

(a) words importing the singular include the plural and vice versa;

(b) words importing a gender include any gender;

(c) words importing a person include: (a) an individual, (b) a company, sole proprietorship, partnership, trust, joint venture, association, corporation or other private or public body corporate; and (c) any government, government agency or body, regulatory agency or body or other body politic or collegiate;

(d) a reference to a person includes that person's successors and permitted assigns;

(e) a reference to a Party includes any person acting on behalf of that Party;

(f) a reference to the Customer's facilities is limited to such facilities as are relevant to the Customer's connection to the Transmitter's transmission system under this Agreement;

(g) a reference to a body, whether statutory or not, that ceases to exist or whose functions are transferred to another body is a reference to the body that replaces it or that substantially succeeds to its powers or functions;

(h) a reference to a document (including a statutory instrument) or a provision of a document includes any amendment or supplement to, or any replacement of, that document or that provision;

(i) the expression "including" means including without limitation, and the expressions "include", "includes" and "included" shall be interpreted accordingly; and

(j) where a word or phrase is defined in this Agreement, including by virtue of the application of section 1.2, or in any document referred to in section 2.1, other parts of speech and grammatical forms of the word or phrase have a corresponding meaning.

2.4. Except when an emergency is anticipated or is occurring, if the time for doing any act or omitting to do any act under this Agreement expires on a day that is not a business day, the act may be done or may be omitted to be done on the next day that is a business day.

3. INCORPORATION OF TRANSMISSION SYSTEM CODE

3.1 The Code is hereby incorporated in its entirety by reference into, and forms an integral part of, this Agreement. Unless the context otherwise requires, all references in this Agreement to "this Agreement" shall be deemed to include a reference to the Code.

3.2. Without limiting the generality of section 3.1:

(a) the Transmitter hereby agrees to be bound by, and at all times to comply with, the Code; and

(b) the Customer acknowledges and agrees that the Transmitter is bound at all times to comply with the Code in addition to complying with the provisions of this Agreement.

4. SCHEDULES

4.1. Incorporation of Schedules

4.1.1. The Schedules form a part of, and are hereby incorporated by reference into, this Agreement.

4.2. Schedules

4.2.1 The following are the Schedules to this Agreement:

Schedule A	-	Single Line Diagram, Description of the Customer's Connection Point(s) and Details of Specific Operations
Schedule B	-	Transmission Services and Associated Charges
	-	Attachment B1
Schedule C	-	Cure Periods for Defaults
Schedule D	-	Fault Levels and Modifications Requiring Transmitter Approval
	-	Attachment D1

Schedule E	-	General Technical Requirements
Schedule F	-	Additional Technical Requirements for Tapped Transformer Stations Supplying Load
Schedule G	-	Protection System Requirements
Schedule H	-	Facilities Deemed Compliant and Obligation to Comply
Schedule I	-	Exchange of Information
Schedule J	-	Embedded Generation, Bypass, Assigned Capacity and True-Ups
	-	Attachment J1
	-	Attachment J2
Schedule K	-	Contacts for Purposes of Notice

4.3. Additional Schedules

4.3.1. The Parties may by mutual agreement append such additional Schedules to this Agreement as may from time to time be required. Where additional Schedules are required by virtue of the fact that technical requirements for generation facilities owned by the Customer are relevant to the Customer's connection to the Transmitter's transmission system under this Agreement, the Parties shall use schedules in the form set out in schedules E and F of version B of Appendix 1 of the Code.

4.3.2. In the event of an inconsistency or conflict between a provision of an additional Schedule referred to in section 4.3.1 and a provision of this Agreement or of a Schedule referred to in section 4.2.1, the provision of this Agreement or of the Schedule referred to in section 4.2.1 shall prevail to the extent of the inconsistency or conflict.

5. NOTICE

5.1. Method of Giving Notice and Effective Date

5.1.1. Subject to section 5.1.3, any notice, demand, consent, request or other communication required or permitted to be given or made under or in relation to this Agreement shall be given or made by courier or other personal form of delivery; by registered mail; by facsimile; or by electronic mail.

5.1.2. A notice, demand, consent, request or other communication referred to in section 5.1.1 shall be deemed to have been duly given or made as follows:

(a) where given or made by courier or other form of personal delivery, on the date of receipt;

(b) where given or made by registered mail, on the sixth day following the date of mailing;

(c) where given or made by facsimile and a complete transmission report is issued from the sender's facsimile transmission equipment, on the day and at the time of transmission as indicated on the sender's facsimile transmission report, if a business day or, if the transmission is on a day which is not a business day or is after 5:00 pm (addressee's time), at 9:00 am on the following business day; and

(d) where given or made by electronic mail, on the day and at the time when the notice, demand, consent, request or other communication is recorded by the sender's electronic communications system as having been received at the electronic mail destination, if a business day, or if that time is after 5:00 pm (addressee's time) or that day is not a business day, at 9:00 am on the following business day.

5.1.3. Any notice, demand, consent, request or other communication required or permitted to be given or made under Schedule A shall be given or made in accordance with the notice provisions contained in that Schedule.

5.2. Address for Notice

5.2.1. Any notice, demand, consent, request or other communication given or made under section 5.1.1 shall be addressed to the applicable representative of the Party identified in Schedule K. A Party may, upon written notice given to the other Party in accordance with section 5.1.1, from time to time change its address or representative for notice, and Schedule K shall be deemed to have been amended accordingly.

5.2.2. Any notice, demand, consent, request or other communication given or made under section 5.1.3 shall be addressed in accordance with Schedule A.

5.3. Exception

5.3.1. Sections 5.1 and 5.2 are subject to such other provisions of this Agreement that expressly require or permit notices, demands, consents, requests or other communications to be given or made by alternative means or to be addressed to other specified representatives of the Parties.

6. ASSIGNMENT

6.1. Subject to section 6.2, no Party may assign or transfer, whether absolutely, by way of security or otherwise, all or any part of its rights or obligations under this Agreement without the prior written consent of the other Party, which consent may not be unreasonably withheld or delayed.

6.2. The Customer may, without the prior written consent of the Transmitter, assign by way of security only all or any part of its rights or obligations under this Agreement to a

Lender. The Customer shall promptly notify the Transmitter upon making any such assignment.

7. FURTHER ASSURANCES

7.1. Each Party shall promptly execute and deliver or cause to be executed and delivered all further documents in connection with this Agreement that the other Party may reasonably require for the purposes of giving effect to this Agreement.

8. WAIVER

8.1. A waiver of any default, breach or non-compliance under this Agreement is not effective unless in writing and signed by the Party to be bound by the waiver. No waiver will be inferred or implied by any failure to act or by the delay in acting by a Party in respect of any default, breach or non-compliance or by anything done or omitted to be done by the other Party. The waiver by a Party of any default, breach or non-compliance under this Agreement shall not operate as a waiver of that Party's rights under this Agreement in respect of any continuing or subsequent default, breach or non-compliance, whether of the same or any other nature.

9. AMENDMENTS

9.1. The Parties may not amend this Agreement without leave of the Board, except where and to the extent expressly permitted by this Agreement.

9.2. The Parties may by mutual agreement amend this Agreement to reflect changes that may from time to time be made to the Code during the term of this Agreement.

9.3. The Parties may, by mutual agreement unless this Agreement otherwise provides, amend the following Schedules:

(a) Schedule A, other than in relation to section A.8;

(b) Schedule B, to reflect any changes to the Transmitter's Rate Order that may from time to time come into effect and in relation to Attachment B1;

(c) Schedule D, including Attachment D1;

(d) Schedule H, in relation to section H.1;

(e) Schedule I;

(f) Schedule J, in relation to Attachment J1 and Attachment J2;

(g) Schedule K; and

(h) any Schedule added by the Parties under section 4.3.1.

9.4. The Parties shall amend this Agreement in such manner as may be required by the Board.

9.5. Any amendment to this Agreement shall be made in writing and duly executed by the Parties.

9.6. In the event of an inconsistency or conflict between a provision of an amendment to a Schedule made under section 9.3, other than an amendment made under section 9.4, and a provision of this Agreement, the provision of this Agreement shall prevail to the extent of the inconsistency or conflict.

9.7. In the event of an inconsistency or conflict between a provision of an amendment to this Agreement, other than an amendment made under section 9.4, and a provision of the Code, the provision of the Code shall prevail to the extent of the inconsistency or conflict.

10. SUCCESSORS AND ASSIGNS

10.1. This Agreement shall enure to the benefit of, and be binding on, the Parties and their respective successors and permitted assigns.

11. ENTIRE AGREEMENT

11.1. Except as expressly provided herein, this Agreement, together with the Schedules, constitutes the entire agreement between the Parties and supersedes all prior oral or written representations and agreements of any kind whatsoever with respect to the subject-matter hereof.

12. GOVERNING LAW

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

13. COUNTERPARTS

13.1. This Agreement may be executed in any number of counterparts, each of which shall be deemed to be an original and all of which taken together shall be deemed to constitute one and the same instrument. Counterparts may be executed either in original or faxed form and the Parties shall adopt any signatures received by a receiving facsimile machine as original signatures of the Parties; provided, however, that any Party providing its signature in such manner shall promptly forward to the other Party an original signed copy of this Agreement which was so faxed.

PART TWO
REPRESENTATIONS AND WARRANTIES

14. REPRESENTATIONS AND WARRANTIES

14.1. Customer's Representations and Warranties

14.1.1. Subject to section 14.3.1, the Customer represents and warrants to the Transmitter as follows, and acknowledges and confirms that the Transmitter is relying on such representations and warranties without independent inquiry in entering into this Agreement:

(a) it is duly incorporated, formed or registered (as applicable) under the laws of its jurisdiction of incorporation, formation or registration (as applicable);

(b) it has all the necessary corporate power, authority, and capacity to enter into this Agreement and to perform its obligations hereunder;

(c) the execution, delivery and performance of this Agreement by it has been duly authorized by all necessary corporate and/or governmental and/or other organizational action and does not (or would not with the giving of notice, the lapse of time or the happening of any other event or condition) result in a violation or a breach of or a default under or give rise to a right of termination, greater rights or increased costs, amendment or cancellation or the acceleration of any obligation under (i) any charter or by-law instruments of the Customer; (ii) any contracts or instruments to which the Customer is bound; or (iii) any laws applicable to it;

(d) any individual executing this Agreement, and any document in connection herewith, on behalf of the Customer has been duly authorized to execute this Agreement and have the full power and authority to bind the Customer;

(e) this Agreement constitutes a legal and binding obligation on the Customer, enforceable against the Customer in accordance with its terms;

(f) other than the facilities listed in Schedule H, its facilities meet the technical requirements of this Agreement; and

(g) it holds all permits, licences and other authorizations that may be necessary to enable it to carry on its business.

14.1.2. The Customer shall promptly notify the Transmitter of any circumstance that does or may result in any of the representations and warranties set forth in section 14.1.1 becoming untrue or inaccurate during the term of this Agreement.

14.2. Transmitters' Representations and Warranties

14.2.1. Subject to section 14.3.1, the Transmitter represents and warrants to the Customer as follows, and acknowledges and confirms that the Customer is relying on such representations and warranties without independent inquiry in entering into this Agreement:

(a) it is duly incorporated, formed or registered (as applicable) under the laws of its jurisdiction of incorporation, formation or registration (as applicable);

(b) it has all the necessary corporate power, authority, and capacity to enter into this Agreement and to perform its obligations hereunder;

(c) the execution, delivery and performance of this Agreement by it has been duly authorized by all necessary corporate and/or governmental and/or other organizational action and does not (or would not with the giving of notice, the lapse of time or the happening of any other event or condition) result in a violation or a breach of or a default under or give rise to a right of termination, greater rights or increased costs, amendment or cancellation or the acceleration of any obligation under (i) any charter or by-law instruments of the Transmitter; (ii) any contracts or instruments to which the Transmitter is bound; or (iii) any laws applicable to it;

(d) any individual executing this Agreement, and any document in connection herewith, on behalf of the Transmitter has been duly authorized to execute this Agreement and have the full power and authority to bind the Transmitter;

(e) this Agreement constitutes a legal and binding obligation on the Transmitter, enforceable against the Transmitter in accordance with its terms;

(f) other than the facilities listed in Schedule H, those of its facilities that are relevant to, or may have an impact on, the Customer's facilities meet the technical requirements of this Agreement; and

(g) it holds all permits, licences and other authorizations that may be necessary to enable it to carry on its business as a Transmitter.

14.2.2. The Transmitter shall promptly notify the Customer of any circumstance that does or may result in any of the representations and warranties set forth in section 14.2.1 becoming untrue or inaccurate during the term of this Agreement.

14.3. Transition

14.3.1. Where the provisions of this Agreement apply by virtue of the application of section 3.0.7 of the Code, the representations and warranties referred to in sections 14.1.1(f) and 14.2.1(f) shall be deemed to be given only once the parties have completed sections H.1.1 and H.1.2 of Schedule H.

PART THREE
LIABILITY AND FORCE MAJEURE

15. LIABILITY

15.1. Except as otherwise expressly provided in this Agreement, the Transmitter shall not be liable for any Party Losses of the Customer whatsoever arising out of any act or omission of the Transmitter under this Agreement unless such Party Losses result from the willful misconduct or negligence of the Transmitter.

15.2. Except as otherwise expressly provided in this Agreement, the Customer shall not be liable for any Party Losses of the Transmitter whatsoever arising out of any act or omission of the Customer under this Agreement unless such Party Losses result from the willful misconduct or negligence of the Customer.

15.3. Despite sections 15.1 and 15.2 but except as otherwise expressly provided in sections 21.4, 27.13.6, 27.13.7 and 27.13.9, neither Party shall be liable to the other, whether as claims in contract or in tort or otherwise, for any loss of profits or revenues, business interruption losses, loss of contract or loss of goodwill, or for any indirect, consequential, incidental or special damages, including punitive or exemplary damages.

15.4. A Party shall have a duty to mitigate any Party Losses relating to any claim for indemnification from the other Party that may be made in relation to that other Party. Nothing in this section 15.4 shall require the mitigating Party to mitigate or alleviate the effects of any strike, lockout, restrictive work practice or other labour dispute.

15.5. A Party shall give prompt notice to the other Party of any claim with respect to which indemnification is being or may be sought under this Agreement.

16. FORCE MAJEURE

16.1. No Liability Where Force Majeure Event Occurs

16.1.1. Subject to sections 16.1.2 to 16.1.4, a Party shall not be liable to the other Party for any failure or delay in the performance of any of its obligations under this Agreement in whole or in part to the extent that such failure or delay is due to a Force Majeure Event.

16.1.2. The Party invoking a Force Majeure Event shall only be excused from performance under section 16.1.1:

(a) for so long as the Force Majeure Event continues and for such reasonable period of time thereafter as may be necessary for the Party to resume performance of the obligation; and

(b) where and to the extent that the failure or delay in performance would not have been experienced but for such Force Majeure Event.

16.1.3. Nothing in this section 16 shall excuse a Party from performing any of their respective emergency-related obligations in the event of an emergency.

16.1.4. A Party may not invoke a Force Majeure Event unless it has given notice in accordance with section 16.2.

16.2. Obligations Where Force Majeure Event Occurs

16.2.1. Where a Party invokes a Force Majeure Event, it shall promptly give notice to the other Party, which notice shall include particulars of:

(a) the nature of the Force Majeure Event and ,if known, of its duration;

(b) the effect that the Force Majeure Event is having on the Party's performance of its obligations under this Agreement; and

(c) the measures that the Party is taking, or proposes to take, to alleviate the impact of the Force Majeure Event.

Such notice may be given verbally, in which case the notifying Party shall as soon as practicable thereafter confirm the notice in writing.

16.2.2. Where a Party invokes a Force Majeure Event, it shall use all reasonable endeavours to mitigate or alleviate the effects of the Force Majeure Event on the performance of its obligations under this Agreement. Nothing in this section 16.2.2 shall require the mitigating Party to mitigate or alleviate the effects of any strike, lockout, restrictive work practice or other labour dispute.

16.2.3. Where a Party invokes a Force Majeure Event, it shall notify the other Party in writing as soon as practicable of the cessation of the Force Majeure Event and of the cessation of the effects of the Force Majeure Event on the Party's performance of its obligations under this Agreement.

PART FOUR
DISPUTE RESOLUTION

17. DISPUTE RESOLUTION

17.1. Exclusivity

17.1.1. Subject to sections 17.1.2 and 17.1.3:

(a) the dispute resolution procedure set forth in this section 17 shall apply to all disputes between the Customer and the Transmitter arising under or in relation to this Agreement; and

(b) the Parties shall comply with the procedure set out in this section 17 before taking any other civil or other proceeding in relation to the dispute.

17.1.2. Nothing in section 17.1.1 shall prevent a Party from seeking urgent or interlocutory relief from a court of competent jurisdiction in the Province of Ontario in relation to any dispute between them arising under or in relation to this Agreement.

17.1.3. The dispute resolution procedure set forth in this section 17 shall not apply:

(a) in relation to any matter that must or may be submitted to the Board for resolution under section 4.7.1, 6.1.8, 6.2.2, 6.2.20, 6.2.27, 6.3.5, 6.3.11(c) or Appendix 4 of the Code or section J.4.6 of Schedule J; or

(b) in relation to any dispute to be resolved under the Market Rules as described in section B.7 of Schedule B.

17.2. Duty to Negotiate

17.2.1. Any dispute between the Customer and the Transmitter referred to in section 17.1.1 shall be referred to a designated senior representative of each of the Parties for resolution on an informal basis as quickly as possible.

17.2.2. The designated senior representatives of the Parties shall attempt in good faith to resolve the dispute within thirty days of the date on which the dispute was referred to them. The Parties may by mutual agreement extend such period.

17.2.3. If a dispute is settled by the designated senior representatives of the Parties, the Parties shall prepare and execute minutes setting forth the terms of the settlement. Such terms shall bind the Parties. The subject-matter of the dispute shall not thereafter be the subject of any civil or other proceeding, other than in relation to the enforcement of the terms of the settlement.

17.2.4. If a Party fails to comply with the terms of settlement referred to in section 17.2.3, the other Party may submit the matter to arbitration under section 17.3.1.

17.2.5. A copy of the minutes referred to in section 17.2.3 from which all Confidential Information has been expunged shall be made available to the public by the Transmitter.

17.2.6. The Parties may not, by means of the settlement of a dispute under section 17.2.3 or section 17.5.10, agree to terms or conditions that would, if they had been the subject of an amendment to this Agreement, violate section 9.1.

17.3. Submission of Unresolved Disputes to Arbitration

17.3.1. If the designated senior representatives of the Parties cannot resolve the dispute within the time period set out in section 17.2.2 or where section 17.2.4 or 17.5.11 applies, either Party may submit the dispute to binding arbitration under sections 17.4 and 17.5 by notice to the other Party.

17.4. Selection of Arbitrator(s)

17.4.1. The Parties shall use good faith efforts to appoint a single arbitrator for purposes of the arbitration of the dispute. If the Parties fail to agree upon a single arbitrator within ten business days of the date of the notice referred to in section 17.3.1, each Party shall within five business days thereafter choose one arbitrator. The two arbitrators so chosen shall within twenty days select a third arbitrator.

17.4.2. Where a Party has failed to choose an arbitrator under section 17.4.1 within the time allowed, the other Party may apply to a court to appoint a single arbitrator to resolve the dispute.

17.4.3. No person shall be appointed as an arbitrator unless that person:

(a) is independent of the Parties;

(b) has no current or past substantial business or financial relationship with either Party, except for prior arbitration; and

(c) is qualified by education or experience to resolve the dispute.

17.5. Arbitration Procedure

17.5.1 The arbitrator(s) shall provide each of the Parties with an opportunity to be heard orally and/or in writing, as may be appropriate to the nature of the dispute.

17.5.2. The *Arbitration Act, 1991* (Ontario) shall apply to an arbitration conducted under this section 17.

17.5.3. The arbitrator(s) shall make due provision for the adequate protection of Confidential Information that may be disclosed or may be required to be produced during the course of an arbitration in a manner consistent with the confidentiality obligations of section 21.

17.5.4. All proceedings relating to the arbitration of a dispute shall be conducted in private unless the Parties agree otherwise.

17.5.5. Unless the Parties otherwise agree, the arbitrator(s) shall render a decision within ninety days of the date of appointment of the last to be appointed arbitrator, and shall notify the Parties of the decision and of the reasons therefor.

17.5.6. The decision of the arbitrator(s) shall be final and binding on the Parties and may be enforced in accordance with the provisions of the *Arbitration Act, 1991* (Ontario). The Party against which the decision is enforced shall bear all costs and expenses reasonably incurred by the other Party in enforcing the decision.

17.5.7. A copy of the decision of the arbitrator(s) from which all Confidential Information has been expunged shall be made available to the public by the Transmitter.

17.5.8. Subject to section 17.5.9, each Party shall be responsible for its own costs and expenses incurred in the arbitration of a dispute and for the costs and expenses of the arbitrator(s) if appointed to resolve the dispute.

17.5.9. The arbitrator(s) may, if the arbitrator(s) consider it just and reasonable to do so, make an award of costs against or in favour of a Party to the dispute. Such an award of costs may relate to either or both the costs and expenses of the arbitrator(s) and the costs and expenses of the Parties to the dispute.

17.5.10 If a dispute is settled by the Parties during the course of an arbitration, the Parties shall prepare and execute minutes setting forth the terms of the settlement. Such terms shall bind the Parties, and either Party may request that the arbitrator(s) record the settlement in the form of an award under section 36 of the *Arbitration Act, 1991* (Ontario). The subject-matter of the dispute shall not thereafter be the subject of any civil or other proceeding, other than in relation to the enforcement of the terms of the settlement.

17.5.11 If a Party fails to comply with the terms of settlement referred to in section 17.5.10, the other Party may submit the matter to arbitration under section 17.3.1 if the settlement has

not been recorded in the form of an award under section 36 of the *Arbitration Act, 1991* (Ontario).

17.5.12 A copy of the minutes referred to in section 17.5.10 from which all Confidential Information has been expunged shall be made available to the public by the Transmitter.

PART FIVE
TERM, TERMINATION AND EVENTS OF DEFAULT

18. TERM AND TERMINATION

18.1. Coming into Force

18.1.1. Subject to section 18.1.2, this Agreement shall come into force on the date first mentioned above and shall remain in full force and effect until terminated in accordance with this Agreement.

18.1.2. Where the provisions of this Agreement apply by virtue of the application of section 3.0.7 of the Code, those provisions shall come into force on the Code revision date and shall remain in full force and effect until terminated in accordance with this Agreement.

18.2. Termination Without Cause by Customer

18.2.1. The Customer may, if it is not then a Defaulting Party to whom a Default Notice has been delivered, terminate this Agreement at any time during the term of this Agreement by giving the Transmitter six months' prior written notice setting out the termination date.

18.2.2. Where the Customer gives notice to terminate under section 18.2.1, the Transmitter shall disconnect all of the Customer's facilities at all connection points on the termination date specified in that notice or on such other date as the Parties may agree in writing.

18.2.3. Section 20.5 shall apply in relation to the disconnection of the Customer's facilities under section 18.2.2.

18.3. Termination for Cause by Either Party

18.3.1. Termination of this Agreement by a Party by reason of a Default by the other Party shall be effected in accordance with section 19.

18.4. Provisions Relating to Termination Generally

18.4.1. Termination of this Agreement for any reason shall not affect:

(a) the liabilities of either Party that were incurred or arose under this Agreement prior to the time of termination; or

(b) that expressly apply in relation to disconnection of the Customer's facilities following termination of this Agreement.

18.4.2. Without limiting the generality of section 18.4.1(a), the liabilities of the Parties referred to in that section shall include any obligations to make payments in relation to bypass compensation or true-ups provided for in Schedule J.

18.4.3. Termination of this Agreement for any reason shall be without prejudice to the right of the terminating Party to pursue all legal and equitable remedies that may be available to it, including injunctive relief.

18.5. Rights and Remedies not Exclusive

18.5.1. The rights and remedies set out in this Agreement are not intended to be exclusive but rather are cumulative and are in addition to any other right or remedy otherwise available to a Party at law or in equity.

18.5.2. Nothing in section 18.5 shall be interpreted as affecting the limitations of liability set forth in section 15 or the obligation of a Party to comply with section 17 while this Agreement is in force.

18.6. Survival

18.6.1. Sections 18.4 and 18.5 shall survive termination of this Agreement.

19. EVENTS OF DEFAULT AND TERMINATION FOR CAUSE

19.1. Occurrence of an Event of Default

19.1.1. If an Event of Default occurs in relation to a Party, the Non-defaulting Party may, without prejudice to its other rights and remedies as provided for in this Agreement or at law or in equity, serve the Defaulting Party with a notice specifying the Event of Default that has occurred and the applicable Cure Period ("Default Notice").

19.2. Curing Events of Default

19.2.1. Upon receipt of a Default Notice, the Defaulting Party shall be entitled to remedy the Event of Default specified in the Default Notice:

(a) for a Financial Default, within the applicable Cure Period specified in Schedule C, calculated from the date of receipt of the Default Notice;

(b) for a Non-financial Default that has an impact that is referred to in Schedule C, within the applicable Cure Period specified for that impact in Schedule C, calculated from the date of the receipt of the Default Notice; or

(c) for a Non-financial Default that does not have an impact that is referred to in Schedule C, within a period of twenty business days from the date of receipt of the Default Notice.

The Parties may agree to a Cure Period that is longer than the Cure Period that would otherwise apply under section 19.2.1(a) or 19.2.1(b).

19.2.2. During the Cure Period, the Defaulting Party shall diligently seek to remedy the Event of Default specified in the Default Notice.

19.2.3. If the Non-defaulting Party considers that the Defaulting Party is not, during the Cure Period, diligently seeking to remedy a Non-financial Default, the Non-defaulting Party may serve the Defaulting Party with a notice ("End of Cure Period Notice") to that effect. If, within ten business days of receiving the End of Cure Period Notice, the Defaulting Party has not commenced to diligently seek to remedy the Non-financial Default, the Cure Period shall end on the fifth business day following the date of receipt of the End of Cure Period Notice, and section 19.3.1 shall apply.

19.2.4. A Financial Default shall be considered remedied when:

(a) the Defaulting Party has paid to the Non-defaulting Party all amounts specified in the Default Notice, together with interest calculated in accordance with section 19.2.5; and

(b) the Defaulting Party has reimbursed the Non-defaulting Party for all costs of enforcement, recovery, or attempted enforcement or recovery, including reasonable legal costs and expenses, reasonably incurred by the Non-defaulting Party in relation to the Financial Default.

19.2.5. Amounts specified in a Default Notice given in relation to a Financial Default shall bear interest at the prime lending rate set by the Bank of Canada plus two percent from the date on which the Event of Default occurred until the date on which payment is sent to the Non-defaulting Party.

19.2.6. A Non-financial Default shall be considered remedied when:

(a) the Event of Default has been remedied to the reasonable satisfaction of the Non-defaulting Party; and

(b) the Defaulting Party has reimbursed the Non-defaulting Party for all costs of enforcement or recovery or attempted enforcement or recovery, including reasonable legal costs and expenses, reasonably incurred by the Non-defaulting Party in relation to the Non-financial Default.

19.3. Right to Terminate and Disconnect

19.3.1. Subject to section 19.3.2, where an Event of Default has not been remedied prior to the expiry of the applicable Cure Period, including in accordance with section 19.2.3, the Non-defaulting Party may, without prejudice to its other rights and remedies as provided for in this Agreement or at law or in equity, terminate this Agreement by written notice to the Defaulting Party. Such termination shall take effect:

(a) in the case of a Non-financial Default, on the date on which the termination notice is delivered to the Defaulting Party; or

(b) in the case of a Financial Default, on the date that is seven business days from the date on which the termination notice is delivered to the Defaulting Party.

19.3.2. The Transmitter may not terminate this Agreement under section 19.3.1 or, subject to section 19.3.5, disconnect the Customer's facilities under section 19.3.3 in relation to an Event of Default by the Customer where the issue of the Customer's default has been referred to the dispute resolution process referred to in section 17 and the dispute has not been finally resolved.

19.3.3. The Transmitter may disconnect all of the Customer's facilities at all applicable connection points on or after the date on which this Agreement terminates under section 19.3.1.

19.3.4. Section 20.5 shall apply in relation to the disconnection of the Customer's facilities under section 19.3.3.

19.3.5. Nothing in this section 19 shall prevent the Transmitter from::

(a) disconnecting the Customer's facilities where permitted by section 20.3.1, even if the Customer is a Defaulting Party at the relevant time; or

(b) immediately disconnecting the Customer's facilities where the Transmitter reasonably believes that a Non-financial Default by the Customer is having or will have a material adverse effect on the Transmitter's transmission system or on a third party.

19.4. Lender's Right of Substitution

19.4.1. Where a Default Notice has been served on the Customer, an agent or trustee for and on behalf of a Lender ("Security Trustee") or a receiver appointed by the Security Trustee ("Receiver") shall upon notice to the Transmitter be entitled (but not obligated) to exercise all of the rights and obligations of the Customer under this Agreement and shall be entitled to remedy the Event of Default specified in the Default Notice within the applicable Cure Period. The Transmitter shall accept performance of the Customer's obligations under this Agreement by the Security Trustee or Receiver in lieu of the Customer's performance of such obligations, and will not exercise any right to terminate this Agreement under section 19.3.1 due to an Event of Default if the Security Trustee, its nominee or transferee, or the Receiver acknowledges its intention to be bound by the terms of this Agreement and such acknowledgment is received within 30 days of the date of receipt by the Customer of the Default Notice.

PART SIX
DISCONNECTION AND RECONNECTION

20. DISCONNECTION

20.1. Voluntary Permanent Disconnection by Customer

20.1.1. The Customer may at any time voluntarily and permanently disconnect some but not all of its facilities from the Transmitter's transmission facilities provided that the Customer is not then a Defaulting Party to whom a Default Notice has been delivered.

20.1.2. The Customer shall give the Transmitter notice in writing of its intention to voluntarily disconnect some of its facilities under section 20.1.1 no less than ten days before the date on which the Customer wishes to disconnect.

20.1.3. Where the Customer voluntarily and permanently disconnects facilities under section 20.1.1, the Customer shall be liable to make any payments in relation to bypass or true-ups provided for in Schedule J that may be triggered by such disconnection.

20.1.4. Section 20.5 shall apply in relation to the disconnection of the Customer's facilities under section 20.1.2.

20.2. Voluntary Temporary Disconnection by Customer and Reconnection

20.2.1. Where practical, the Customer shall notify the Transmitter prior to temporarily disconnecting its facilities from the Transmitter's transmission system.

20.2.2. The Transmitter shall, at the Customer's request, reconnect the Customer's facilities to its transmission system following a voluntary temporary disconnection under section 20.2.1 once the Transmitter is reasonably satisfied that all requirements of this Agreement are met, that all payments due to be paid by the Customer under this Agreement have been made and that the Customer agrees to pay all reasonable reconnection costs charged by the Transmitter. Reconnection shall be effected in accordance with the Transmitter's Board-approved reconnection procedures referred to in section 6.10.3 of the Code or, in the absence of such procedures, in accordance with the procedures agreed between the Parties.

20.3. Disconnection by Transmitter

20.3.1. The Transmitter may disconnect the Customer's facilities at any connection point and at any time throughout the term of this Agreement in any of the following circumstances:

(a) in accordance with subsection 40 (5) of the *Electricity Act, 1998*, other applicable law, the Transmitter's licence or the Market Rules;

(b) where required to comply with a decision or order of an arbitrator or court made or given under section 17;

(c) during an emergency or where necessary to prevent or minimize the effects of an emergency; or

(d) where required by an order or direction from the IESO given in accordance with the Market Rules.

20.3.2. Section 20.5 shall, to the extent applicable, apply in relation to the disconnection of the Customer's facilities under section 20.3.1.

20.4. Reconnection after Disconnection by Transmitter

20.4.1. Where a Customer's facilities have been disconnected under section 20.3 during an emergency, the Transmitter shall reconnect the Customer's facilities to its transmission facilities when it is reasonably satisfied that the emergency has ceased and that all other requirements of this Agreement are met.

20.4.2. Where a Customer's facilities have been disconnected under section 20.3 other than during an emergency, the Transmitter shall reconnect the Customer's facilities to its transmission system when it is reasonably satisfied that the reason for the disconnection no longer exists, the Customer agrees to pay all reasonable reconnection costs charged by the Transmitter, and the Transmitter is reasonably satisfied of the following, where applicable:

(a) the Customer has taken all necessary steps to prevent the circumstances that caused the disconnection from recurring and has delivered binding undertakings to the Transmitter that such circumstances shall not recur; and

(b) any decision or order of a court or arbitrator made or given under section 17 that requires the Customer to take action to ensure that such circumstances shall not recur has been implemented and/or assurances have been given to the satisfaction of the affected Party that such decision or order will be implemented.

20.4.3. Reconnection under this section 20.4 shall be effected in accordance with the Transmitter's Board-approved reconnection procedures referred to in section 6.10.3 of the Code or, in the absence of such procedures, in accordance with the procedures agreed between the Parties.

20.5. Provisions Applicable to Disconnection Generally

20.5.1. Within 20 business days of the coming into force of this Agreement, the Parties shall develop appropriate operating and decommissioning procedures for the Customer's facilities. The Parties shall comply with those operating and decommissioning procedures in relation to any disconnection of the Customer's facilities.

20.5.2. Where the Customer's facilities are disconnected, each Party shall be entitled to decommission and remove its assets associated with the connection and the applicable connection points. Each Party shall, for that purpose, provide the other Party with all necessary access to its site at all reasonable times.

20.5.3. The Customer shall continue to pay for transmission services provided up to the time of disconnection of its facilities.

20.5.4. The Customer shall pay all reasonable costs, including the costs of removing any of the Transmitter's equipment from the Customer's facilities, that are directly attributable to the disconnection and, where applicable, the subsequent decommissioning of the Customer's facilities. The Transmitter shall not require the removal of the protection and control wiring within the Customer's facilities.

20.5.5. While the Customer's facilities are disconnected, the Transmitter shall not be required to convey electricity to or from the Customer's facilities.

PART SEVEN
EXCHANGE AND CONFIDENTIALITY OF INFORMATION

21. EXCHANGE AND CONFIDENTIALITY OF INFORMATION

21.1. For purposes of this Agreement, "Confidential Information" does not include:

(a) information that is in the public domain, provided that specific items of information shall not be considered to be in the public domain merely because more general information is in the public domain and provided that the information is not in the public domain as a result of a breach of confidence by the Party seeking to disclose the information or a person to whom it has disclosed the information; or

(b) information that is, at the time of the disclosure, in the possession of the receiving Party, provided that it was lawfully obtained from a person under no obligation of confidence in relation to the information.

21.2 Subject to section 21.3, each Party shall treat all Confidential Information disclosed to it by the other Party as confidential and shall not, without the written consent of that other Party:

(a) disclose that Confidential Information to any other person; or

(b) use that Confidential Information for any purpose other than the purpose for which it was disclosed or another applicable purpose contemplated in this Agreement.

Where a Party, with the written consent of the other Party, discloses Confidential Information of that other Party to another person, the Party shall take such steps as may be required to ensure that the other person complies with the confidentiality provisions of this Agreement.

21.3. Nothing in section 21.2 shall prevent the disclosure of Confidential Information:

(a) where required under this Agreement, the Market Rules or a licence;

(b) where required by law or regulatory requirements;

(c) where required by order of a government, government agency, regulatory body or regulatory agency having jurisdiction;

(d) if required in connection with legal proceedings, arbitration or any expert determination relating to the subject matter of this Agreement, or for the purpose of advising a Party in relation thereto;

(e) as may be required to enable the Transmitter to fulfill its obligations to any reliability organization;

(f) as may be required during an emergency or to prevent an emergency; or

(g) by the Customer to a Lender or prospective Lender**.**

21.4. Notwithstanding any provision of section 15, a Party that breaches section 21.2 shall be liable to the other Party for any and all Party Losses of that other Party arising out of such breach.

21.5. The Parties acknowledge and agree that the exchange of information, including Confidential Information, under this Agreement is necessary for maintaining the reliable operation of the Transmitter's transmission system. The Parties further agree that all information, including Confidential Information, exchanged between them shall be prepared, given and used in good faith and shall be provided in a timely and cooperative manner.

21.6. Each Party shall comply with its information exchange obligations as set out in this Agreement, including in Schedule I. In addition, each Party shall provide the other with such information as the other may reasonably require to enable it to perform its obligations under this Agreement.

21.7. Each Party shall as soon as practicable notify the other Party upon becoming aware of a material change or error in any information previously disclosed to the other Party under this Agreement and, in the case of the Customer, in any information contained in its application for connection. The Party shall provide updated or corrected information as required to ensure that information provided to the other Party is up to date and correct.

PART EIGHT
TRANSMISSION SERVICE AND OTHER CHARGES

22. TRANSMISSION SERVICE AND TRANSMISSION SERVICE CHARGES

22.1. The Transmitter shall provide transmission services to the Customer in accordance with this Agreement and the Transmitter's Rate Order.

22.2. The Parties shall comply with their respective obligations as set out in Schedule B in relation to transmission service.

22.3. The Transmitter shall not charge the Customer for transmission services except in accordance with the Transmitter's Rate Order.

22.4. The Customer shall pay for charges for transmission services in accordance with Schedule B.

23. OTHER CHARGES AND PAYMENTS

23.1. In addition to charges for transmission service, the Transmitter may require that the Customer pay the following:

(a) amounts required to give effect to the true-up provisions of Schedule J;

(b) bypass compensation, where permitted by and determined in accordance with this Agreement;

(c) a capital contribution in relation to the construction of new or modified transmission facilities, where permitted by and determined in accordance with the Code;

(d) fees or charges approved by the Board, including fees or charges approved as part of the transmitter's Board-approved connection procedures referred to in section 6.1.4 of the Code; and

(e) any other fees, charges or costs expressly provided for in this Agreement.

PART NINE
TECHNICAL AND OPERATING REQUIREMENTS

24. FACILITY STANDARDS

24.1. The Transmitter shall comply with section 4.3.1 of the Code. The Customer shall ensure that its facilities:

(a) meet all applicable requirements of the Ontario Electrical Safety Authority, subject to any exemption that may have been granted to or that may apply to the Customer;

(b) conform to all applicable industry standards, including those of the Canadian Standards Association, the Institute of Electrical and Electronic Engineers, the American National Standards Institute, and the International Electrotechnical Commission (IEC);

(c) are constructed, operated and maintained in accordance with this Agreement, the Customer's licence, the Market Rules, all applicable reliability standards and good utility practice;

(d) where they are connection facilities, are made by it with due regard for the safety of the Customer's employees and the public;

(e) where they are connection facilities, are made by it on a timely basis and are designed and constructed by it in accordance with the applicable provisions of the Transmitter's Board-approved connection procedures or, in the absence of such Board-approved connection procedures, in accordance with section 6.1.8 of the Code; and

(f) where they are connection facilities, do not materially reduce the reliability or performance of the Transmitter's transmission system and are constructed with such mitigation measures as may be required so that no new available fault current level exceeds the maximum allowable fault levels set out in Appendix 2 if this would have an adverse effect on the Transmitter unless appropriate financial arrangements have been made with the Transmitter under which the Customer will pay the incremental costs of upgrading the Transmitter's facilities to accommodate the new available fault current level.

24.2. The Customer shall ensure that those of its facilities that are connected to the Transmitter's transmission system, other than the facilities identified in section H.1 of Schedule H, comply with the basic general performance standards and technical requirements set out in the Code, including in Appendix 2.

24.3. Where the Transmitter, after conducting a Customer Impact Assessment under section 6.4 of the Code, provides the Customer with a new available fault current level, the Customer shall, at its own expense, upgrade its facilities as may be required to accommodate the new available fault current level. This obligation shall not apply where the new available

fault current level exceeds the maximum allowable fault levels set out in Appendix 2 of the Code.

24.4. The Transmitter and the Customer shall fully cooperate to ensure that modeling data required by this Agreement for the planning, design and operation of connections are complete and accurate. The Transmitter shall conduct, or may require that the Customer conduct, such tests as may be required where the Transmitter believes on reasonable grounds that the accuracy of such data is in question. The Party conducting such tests shall promptly report the results to the other Party. Where the tests are conducted by the Transmitter, the tests shall be conducted at a time that is mutually agreed by the Customer and the Transmitter, and the Customer shall reimburse the Transmitter for the costs and expenses reasonably incurred by the Transmitter in conducting the tests. If the testing is required to be rescheduled at the request of a Party or by reason of a Party's failure to attend, that Party shall pay all reasonable costs incurred by the other Party in respect of the rescheduling of the test.

24.5. The Customer shall, at the Transmitter's request, permit the Transmitter to participate in the commissioning, inspection, and testing of the Customer's facilities so as to enable the Transmitter to ensure that the Customer's facilities will not adversely affect the reliability of the Transmitter's transmission system.

24.6. Where section 24.5 applies, the commissioning, inspection or testing of the Customer's facilities shall be conducted at a time that is mutually agreed by the Customer and the Transmitter. If the commissioning, inspection or testing is required to be rescheduled at the request of a Party or by reason of a Party's failure to attend, that Party shall pay all reasonable costs incurred by the other Party in respect of the rescheduling of the commissioning, inspection or testing activity.

25. ADDITIONAL TECHNICAL REQUIREMENTS

25.1. Each Party shall comply with their respective obligations as set out in Schedules E, F and G.

25.2. Each Party shall ensure that its facilities meet the technical requirements set out in Schedules E, F and G.

26. OPERATIONAL STANDARDS AND REPORTING

26.1. As of the date of this Agreement, the fault levels at all connection points applicable to the Customer's facilities and the assumptions underlying those fault levels, as specified by the Transmitter in accordance with the Market Rules, are set out in section D.1 of Schedule D. The Transmitter shall update such fault levels as may be required under this Agreement or in response to a request by the Customer under section 26.2, and the Parties shall amend Schedule D accordingly.

26.2. The Customer acknowledges that the fault levels at connection points applicable to the Customer's facilities will change from time to time, and agrees that it may not rely upon the fault levels as specified section D.1 of Schedule D. Where the Customer reasonably

requires confirmation of the fault levels at a connection point applicable to the Customer's facilities, the Customer shall submit a request to that effect to the Transmitter. The Transmitter shall then provide the Customer with the current fault levels.

26.3. The Customer shall promptly report to the Transmitter any changes in its facilities that could materially affect the performance of the Transmitter's transmission system.

26.4. The Customer shall, at the Transmitter's request, promptly report to the Transmitter any and all incidents involving the automatic operation of the Customer's facilities' protective relays that affect the Transmitter's transmission facilities.

26.5. The Transmitter shall promptly report to the Customer any changes in its facilities that could materially affect any transmission services provided to the Customer under this Agreement.

27. OPERATIONS AND MAINTENANCE

27.1. Work on Site of Other Party

27.1.1. When a Party is conducting work at the other Party's site, the working Party shall:

(a) subject to section 27.1.2, comply with all of the host Party's practices and requirements relating to occupational health and safety and environmental protection;

(b) comply with all applicable law relating to occupational health and safety and environmental protection; and

(c) comply with all of the host Party's reasonable practices and requirements relating to security of the host Party's site, including entering into an access agreement on reasonable terms relating to security of the host Party's site.

27.1.2. When a Party is conducting work at the other Party's site, the working Party shall comply with its own practices and requirements in relation to occupational health and safety and environmental protection:

(a) to the extent permitted by the host Party, which permission shall not be granted unless the host Party is satisfied that the working Party's practices and requirements provide for a level of safety or protection that equals or exceeds its own; or

(b) to the extent that the host Party has not made its practices or requirements known to the working Party.

27.2. General

27.2.1. Each Party shall ensure that its facilities are operated and maintained only by persons qualified to do so.

27.2.2. Each Party shall operate and maintain its facilities in accordance with Schedule A.

27.3. Controlling Authorities

27.3.1. The Controlling Authority for each Party is the person identified as such in Schedule A. A Party may, by written notice to the Controlling Authority of the other Party, from time to time change its Controlling Authority, and the Parties shall amend Schedule A accordingly.

27.3.2. A Party shall comply with any request received from the Controlling Authority of the other Party.

27.4. Communication Between the Parties

27.4.1. Except as otherwise provided in this Agreement, all communications between the Parties relating to routine operating and maintenance matters shall be exchanged between the Parties' respective Controlling Authorities in accordance with the contact information set out in Schedule A, or as otherwise specified in Schedule A.

27.4.2. Each Party shall provide the other Party with a communications protocol to be used by that other Party in emergency situations. The protocol shall include the name of the Party's site emergency coordinator.

27.5. Switching

27.5.1 Each Party shall, through its Controlling Authority, develop a written protocol that establishes the conditions for, and the coordination of, switching in respect of equipment under its control.

27.5.2. The Parties shall, through their respective Controlling Authorities, approve one another's switching protocols.

27.5.3. A Party may, with the consent of the other Party, appoint an employee of the other Party as its designate for switching purposes, provided that orders to operate must be issued by the Party's Controlling Authority.

27.5.4. The Transmitter may issue to the Customer, and the Customer shall comply with, such switching instructions as may be required to maintain the security and reliability of the Transmitter's transmission system.

27.5.5. The Controlling Authorities of the Parties shall, prior to the time at which any switching activity is to occur, agree upon procedures for such switching activity.

27.6 Isolation of Facilities at Customer's Request

27.6.1. A Party shall not, other than in an emergency, operate an isolating disconnect switch except on prior notice to the other Party.

27.6.2. If the Customer requires isolation of its own facilities or of facilities under the Transmitter's control, the Customer's Controlling Authority shall deliver a written notice to that effect to the Transmitter's Controlling Authority. The written notice shall contain the following:

(a) a request that the Transmitter's Controlling Authority provide a Supporting Guarantee;

(b) the Transmitter's assigned equipment operating designations, if applicable; and

(c) the Customer's assigned equipment operating designations, if the Transmitter's equipment operating designations have not been assigned.

27.6.3. After the written notice referred to in section 27.6.2 has been delivered, the Customer's Controlling Authority may request, and the Transmitter's Controlling Authority shall ensure, that the isolation and subsequent reconnection of the Customer's relevant equipment is done on a timely basis. The Parties shall bear their own costs and expenses associated with such isolation and reconnection.

27.6.4. The Transmitter may, provided that it has given advance notice to the Customer, lock the isolating disconnect switch in the open position in any of the following circumstances:

(a) where necessary to protect the Transmitter's personnel or equipment and the Transmitter has received a Supporting Guarantee from the Customer, in which case the lock shall be under the Transmitter's control for the duration of the Supporting Guarantee;

(b) where the operation of the Transmitter's equipment interferes with the operation of the Customer's equipment;

(c) where equipment owned by either Party interferes with the operation of the Transmitter's transmission system; or

(d) where the Transmitter has been directed by the IESO to do so in accordance with the Market Rules.

27.7. Isolation of Facilities at Transmitter's Request

27.7.1. If the Transmitter requires isolation of its own facilities from the Customer's facilities or isolation of facilities under the Customer's control, the Transmitter's Controlling Authority shall deliver a written notice to that effect to the Customer's Controlling Authority. The written notice shall contain a request that the Customer's Controlling Authority provide a Supporting Guarantee that identifies the Customer's assigned equipment operating designations.

27.7.2. After the written notice referred to in section 27.7.1 has been delivered, the Transmitter's Controlling Authority may request, and the Customer's Controlling Authority shall ensure, that the isolation and subsequent reconnection of the Transmitter's relevant equipment is done on a timely basis. The Parties shall bear their own costs and expenses associated with such isolation and reconnection.

27.8. Alternative Method of Isolation

27.8.1. A Party may establish its own Work Protection in place of obtaining a Supporting Guarantee from the other Party.

27.8.2. The Party whose facilities are required in order to establish Work Protection shall provide the other Party with access to those facilities.

27.8.3. Establishing Work Protection shall be limited to the hanging of tags and the locking of devices.

27.9. Forced Outages

27.9.1. Where the forced outage of the facilities of one Party adversely affects the facilities of the other Party, the Controlling Authority of the Party experiencing the forced outage shall promptly notify the Controlling Authority of the other Party of the forced outage.

27.9.2. The Controlling Authority of a Party shall have sole authority to identify the need for and to initiate a forced outage of that Party's facilities.

27.10. Planned Work

27.10.1 Where planned work to be performed by a Party may affect the safety of the other Party's personnel, the Party performing the work shall provide the other Party with all required Work Protection documentation and related notices in writing or by such other means as they may agree in writing.

27.10.2 Where planned work on the facilities of a Party:

(a) requires the participation or cooperation of the other Party; or

(b) could adversely affect the normal operation of the other Party's facilities,

the other Party shall use commercially reasonable efforts to accommodate the planned work and shall negotiate in good faith the reasonable procedures and cost sharing criteria applicable to the planned work.

27.10.3 The Customer shall take all reasonable steps to ensure that all anticipated and planned outages of its facilities for each calendar year are submitted to the Transmitter by October 1st of the preceding year.

27.10.4 All planned work on the Customer's facilities that may affect the Transmitter's transmission facilities shall be scheduled by the Customer with the Transmitter's Controlling Authority.

27.10.5. Where the Customer plans work on its facilities that:

(a) requires a feeder breaker to be opened or operated;

(b) requires any disconnection or isolation from any facilities of either Party that are less than 50 kV, such as a feeder breaker;

(c) will result in load changes of greater than 5 MW; or

(d) will involve a load transfer or a switching operation that directly affects the Transmitter's transmission facilities,

the Customer's Controlling Authority shall submit a request to the Transmitter's representative identified in Schedule A, including a request to provide a Supporting Guarantee where applicable. Such request shall be submitted in writing and shall be submitted at least four days in advance of the planned work or within such other period as the Parties may agree.

27.10.6 Where the Customer plans work on its facilities that requires that multiple feeder breakers, a station bus or a whole transformer station be operated, the Customer's Controlling Authority shall submit a request to the Transmitter's representative identified in Schedule A, including a request to provide a Supporting Guarantee where applicable. Such request shall be submitted in writing and shall be submitted at least ten days in advance of the planned work or within such other period as the Parties may agree.

27.10.7 Where the Transmitter plans work on its facilities that directly affects the Customer's facilities and that requires that multiple feeder breakers, a station bus or a whole transformer station be operated, the Transmitter's Controlling Authority shall give notice of the planned work to the Customer's representative identified in Schedule A. Such notice shall be submitted in writing and shall be submitted at least ten days in advance of the planned work or within such other period as the Parties may agree.

27.10.8 Where the Transmitter plans work on its facilities that directly affects the Customer's facilities and that requires a feeder breaker to be opened or operated,

the Transmitter's Controlling Authority shall give notice of the planned work to the Customer's representative identified in Schedule A. Such notice shall be submitted in writing and shall be submitted at least four days in advance of the planned work or within such other period as the Parties may agree.

27.10.9 The Controlling Authority of a Party may submit to the other Party a written request for permission to re-schedule planned work that has been previously notified to or scheduled with that other Party. Such request must be given in writing at least two business days prior to the date on which the planned work was originally scheduled to occur.

27.10.10. If a Party's request to re-schedule cannot be reasonably accommodated by the other Party and the Parties cannot agree on an alternate date, the matter shall be submitted to the dispute resolution process set out in section 17.

27.11. Shutdown of Customer's Facilities

27.11.1. The Customer's Controlling Authority shall promptly notify the Transmitter's Controlling Authority in the event that the Customer's facilities are shut down for any reason. The Transmitter shall investigate and determine the cause of the shutdown, using available evidence including input from the Customer's staff.

27.11.2. Once the Transmitter is satisfied that reconnection of the Customer's facilities following a shut down will not adversely affect the Transmitter's transmission system, the Transmitter shall notify the Customer as soon as practicable that it may reconnect its facilities to the Transmitter's transmission facilities. The Customer shall not reconnect its facilities to the Transmitter's transmission facilities following a shut down until authorized to do so by the Transmitter's Controlling Authority. Reconnection shall be effected in accordance with the Transmitter's Board-approved reconnection procedures referred to in section 6.10.3 of the Code or, in the absence of such procedures, in accordance with procedures agreed between the Parties.

27.12. Emergency Operations

27.12.1. During an emergency or in order to prevent or minimize the effects of an emergency, a Party may without prior notice to the other Party take whatever immediate action it deems necessary to ensure public safety or to safeguard life, property or the environment.

27.12.2. Where a Party takes action under section 27.12.1, it shall promptly report the action taken and the reason for that action to the other Party's Controlling Authority.

27.12.3. During an emergency or in order to prevent or minimize the effects of an emergency, the Transmitter may interrupt supply to the Customer's facilities in order to protect the stability, reliability or integrity of the Transmitter's transmission facilities or to maintain the availability of those facilities. In such a

case, the Transmitter shall notify the Customer as soon as possible of the transmission system's emergency status and of when to expect the resumption of normal operations. The Transmitter shall notify the Customer once the Transmitter determines that the Customer's facilities may be reconnected. The Customer shall not reconnect its facilities until authorized to do so by the Transmitter.

27.12.4. The Customer shall provide to the Transmitter a rotational load-shedding schedule that identifies the loads that may be required to be shed under section 27.12.5. The schedule shall also identify the controllable devices for each such load. The Transmitter may review the rotational load-shedding schedule with the Customer annually or more often if required.

27.12.5. Where it is directed to do so by the IESO, the Transmitter's Controlling Authority shall initiate rotational load shedding in accordance with Schedule A. The Customer shall respond in accordance with Schedule A and shall comply with the Transmitter's Controlling Authority's direction to shed load.

27.12.6. Where it is directed to do so by the IESO, the Transmitter's Controlling Authority shall initiate a rotational load shedding simulation in accordance with Schedule A. The Customer shall respond in accordance with Schedule A.

27.12.7. In an emergency, the Parties shall communicate in accordance with the communications protocols provided to one another under section 27.4.2.

27.13. Access to and Security of Facilities

27.13.1. Each Party shall ensure that its facilities are secure at all times. Where a Party's facilities are located on the site of another Party, the Parties shall cooperate to ensure the security of those facilities in accordance with section 27.1.1(c).

27.13.2. Each Party shall be entitled to access the site or facilities of the other Party at all reasonable times where required in order to carry out work on its facilities or where otherwise permitted or required under this Agreement. Such access shall be effected in accordance with sections 27.13.4 and 27.13.5.

27.13.3. Each Party shall, to facilitate the exercise by the other Party of its access rights, provide that other Party with all applicable access procedures, including procedures relating to access codes and keys.

27.13.4. Where a Party wishes to exercise its right of access to the site or facilities of the other Party, the accessing Party shall provide reasonable prior notice to the host Party of the date, time and location of access and of the nature of the work to be undertaken. Where the accessing Party's access cannot reasonably be accommodated by the host Party, the Parties shall agree on another date and time for access.

27.13.5. Where a Party is exercising its right of access, the Party shall:

(a) comply with the obligations set out in section 27.1;

(b) ensure that any person that will have access to the host Party's site or facilities has been properly trained;

(c) comply with the procedures provided to it by the host Party under section 27.13.3;

(d) not damage or interfere with the host Party's property (provided that the exercise of the right of access shall not itself be considered interference); and

(e) not interact with representatives of the host Party other than the person designated for such purpose by the host Party or as may be permitted by that designated person.

27.13.6. Where an accessing Party causes damage to or loss of any property of the host Party, the accessing Party shall promptly notify the host Party. Notwithstanding any provision of section 15, the accessing Party shall pay to the host Party the host Party's reasonable costs of repairing such property or, if such property cannot be repaired, of replacing such property.

27.13.7. Where the property of a Party is on the site of the other Party, the host Party shall not interfere with or cause damage to or the loss of that property. Where the host Party causes such damage or loss, the host Party shall promptly notify the other Party. Notwithstanding any provision of section 15, the host Party shall pay to the other Party the other Party's reasonable costs of repairing such property or, if such property cannot be repaired, of replacing such property.

27.13.8. In addition to the general right of access referred to in section 27.13.2, the Transmitter may access the site or facilities of the Customer in order to ensure that the Customer's facilities comply with the requirements of this Agreement or for the purpose of investigating a threat or potential threat to the security of the Transmitter's transmission system. Such right of access shall be exercised in accordance with the provisions of this section 27.13.

27.13.9. Nothing in this section 27.13 shall prevent or restrict a Party from doing any of the following in an emergency or where required to prevent or minimize the effects of an emergency:

(a) interfering with the property of the other Party that is on its site; or

(b) accessing the site of the other Party without notice.

Where a Party takes such action in an emergency and causes damage to or loss of the property of the other Party, the acting Party shall promptly notify the other Party. Notwithstanding any provision of section 15, the acting Party shall pay to the other Party the other Party's reasonable costs of repairing such property or, if

such property cannot be repaired, of replacing such property.

28. INSPECTION, TESTING, MONITORING AND NEW, MODIFIED OR REPLACEMENT CUSTOMER FACILITIES

28.1. General Requirements

28.1.1. The Customer shall inspect, test and monitor its facilities to ensure continued compliance with all applicable instruments and standards referred to in paragraphs (a) to (c) of section 24.1.

28.1.2. Where the Transmitter carries out any inspection, testing or monitoring of the Customer's facilities where required or permitted under this Agreement, the Customer shall pay the Transmitter's reasonable costs of doing so.

28.1.3. The Transmitter shall inspect, test and monitor its transmission facilities to ensure continued compliance with all applicable instruments and standards referred to in section 4.3.1 of the Code.

28.1.4. Each Party shall maintain complete and accurate records of the results of all performance inspection, testing and monitoring that it conducts in fulfillment of its obligations under this Agreement. Such records shall be maintained by each Party for a minimum of seven years or for such shorter time as the Board may permit.

28.1.5. Each Party shall, at the request of the other, provide the other Party with the records referred to in section 28.1.4. Without limiting the generality of the foregoing, the Customer shall, at the Transmitter's request, provide the Transmitter with:

(a) test certificates certifying that the Customer's facilities have passed all relevant tests and comply with all applicable instruments and standards referred to in paragraphs (a) to (c) of section 24.1; and

(b) copies of any certificates of inspection received from the Ontario Electricity Safety Authority in relation to the Customer's facilities.

28.2. New, Modified or Replacement Customer Facilities

28.2.1. The Customer shall, at the Transmitter's request, permit the Transmitter to inspect, test or witness the commissioning of any of the Customer's new, modified or replacement facilities where the Transmitter reasonably considers that such new, modified or replacement facilities may adversely affect the performance of the Transmitter's transmission system. The Customer shall pay the Transmitter's reasonable costs of doing so.

28.2.2. Where section 28.2.1 applies, the inspection, testing or commissioning of the Customer's facilities shall be conducted at a time that is mutually agreed by the Customer and the Transmitter. If the inspection, test or commissioning is required

to be rescheduled at the request of a Party or by reason of a Party's failure to attend, the Party shall pay all reasonable costs incurred by the other Party in respect of the rescheduling of the inspection, testing or commissioning activity.

28.2.3. The Customer shall, at the Transmitter's request, provide the Transmitter with test certificates, including any certificates of inspection that the Ontario Electrical Safety Authority may have issued, certifying that any of the Customer's new, modified or replacement facilities have passed the relevant tests and comply with all applicable instruments and standards referred to in paragraphs (a) to (c) of section 24.1. The Transmitter may require the provision of these certificates as a condition of connecting any of the Customer's new, modified or replacement facilities. The Customer acknowledges that the Transmitter cannot, where a connection authorization issued by the Ontario Electrical Safety Authority is required in relation to the Customer's new, modified or replacement facilities, connect such facilities unless that connection authorization has been issued.

28.2.4. The Transmitter shall provide to the Customer such technical parameters as may be required to assist the Customer in ensuring that the design of the Customer's facilities shall be consistent with the requirements applicable to the Transmitter's transmission system as set out in this Agreement.

28.2.5. The Customer shall not make any modifications to its facilities of a type that is specified in section D.2 of Schedule D without the prior approval of the Transmitter.

28.2.6. Where the Transmitter considers that a type of modification that is not already specified in section D.2 of Schedule D is likely to have a material adverse effect on the Transmitter's transmission facilities, on the facilities of another of the Transmitter's customers or on the facilities of one of the Transmitter's neighbouring Ontario transmitters, the Transmitter shall so notify the Customer. The Parties shall then negotiate in good faith appropriate amendments to section D.2 of Schedule D.

PART TEN
SCHEDULE J

29. COMPLIANCE WITH SCHEDULE J

29.1. The Parties shall comply with their respective obligations under Schedule J.

IN WITNESS WHEREOF, the Parties hereto, intending to be legally bound, have caused this Agreement to be executed by their duly authorized representatives.

Name of Transmitter	Name of Customer
By: Name:_____	By: Name:_____

SCHEDULE A

SINGLE LINE DIAGRAM, DESCRIPTION OF THE CUSTOMER'S CONNECTION POINT(S) AND DETAILS OF SPECIFIC OPERATIONS

A.1. SINGLE LINE DIAGRAM AND CONNECTION POINT(S)

[to be inserted by the Parties]

A.2. LIST OF FACILITIES ON THE PROPERTY OF THE OTHER PARTY

A.2.1. The following Customer facilities are located on the Transmitter's site:

[to be completed by the Parties]

A.2.2. The following Transmitter's transmission facilities are located on the Customer's site:

[to be completed by the Parties]

A.3. TELEPHONE CONTACT

A.3.1. Either Party has the right to change the position designations and telephone numbers listed below with immediate effect at any time by notice in writing delivered to the other Party by fax or other telegraphic means. Any employee of a Party with apparent authority may deliver such a notice to the other Party.

Day-to-Day Operations

For the operation of the Transmitter's transmission facilities and the Customer's facilities.

Transmitter	Customer
Operating Contacts: Position: Name: Location: Phone Number: Fax Number:	
Outage Planning: Position: Name: Location: Phone Number:	

Fax Number:

Position:
Name:
Location:
Phone Number:
Fax Number:

Position:
Name:
Location:
Phone Number:
Fax Number:

Notes:

Contract Administration for operating services

	Transmitter	**Customer**
Position: Name: Location: Phone Number: Fax Number:		
Position: Name: Location: Phone Number: Fax Number:		
Position: Name: Location: Phone Number: Fax Number:		

A.4. OWNER AND OPERATING CONTROL

A.4.1. A Party may change its designated controlling authority set out below at any time during the term of the Agreement, subject to the following conditions:

(a) the Transmitter may change its designated controlling authority only for the Transmitter's transmission facilities;

(b) the Customer may change its designated controlling authority only for the Customer;

(c) either Party shall notify the other in writing of any change in its designated controlling authority at least ten business days before implementing a change; and

(d) notification of any changes to the controlling authority shall be exchanged between the Transmitter and the Customer as follows:

Transmitter	The Customer
Director - Transmission Operations Division	General Manager [Appropriate level of Management to be identified by the Customer]
All affected Controlling Authorities and Transmission Operations Management Centre	All affected Controlling Authorities

A.4.2. The Customer:

(a) owns:

(b) has operating control of:

A.4.3. The Transmitter:

(a) owns:

(b) has operating control of:

A.5. Metering Facilities Diagram

This diagram is based on the protection, control, and metering diagram.

A.6. Normal Operations

This Schedule shall include Customer-specific Information during normal operations.

A.7. Emergency Operations

This Schedule would include Customer specific Information during Emergency operations.

A.8. Rotational Load Shedding

A.8.1. Scope

This instruction assigns authority and defines responsibilities for manual primary load shedding that may be required to correct abnormal conditions on the IESO-controlled grid or the Transmitter's transmission facilities. Procedures are also outlined for conducting simulation of rotational load shedding.

A.8.2. Information

From time to time the IESO-controlled grid or the Transmitter's transmission facilities may experience abnormal conditions. To minimize their impact, and to restore and maintain security of operations, prompt control action must be taken. The control actions are numerous and vary according to the abnormal condition.

In extreme situations, the only way to correct abnormal conditions may be to shed primary firm load. Recognizing the impact on the Customer, this control action must be pre-planned as much in advance as possible. Rotational load shedding of primary firm load provides assurance that the abnormal condition will be quickly corrected while allowing for Customer selectivity. The schedule shall comply with the IESO's rules, procedures and policies in effect at the relevant time.

A.8.3. Response to Controlled Rotational Load Shedding

The request to implement a controlled rotation load shed will be as directed by the IESO and can come from the Transmitter's controlling authority located at the Transmitter's territory operating centre.

The request for implementation will follow this model:

"To comply with directions from the IESO, this is the Transmitter's controlling authority calling. We are currently implementing a rotational load shed. Would you please reduce your load to X MW's. You will be notified when conditions allow you to return to full load."

The Customer's response will follow this model:

"I understand that the Transmitter's controlling authority is implementing a rotational load shed and that I am to reduce load to X MW's. Is that correct?"

The Transmitter's controlling authority will confirm the request.

A.8.4. Response to Controlled Rotational Load Shedding Simulation

The request to simulate a controlled rotation load shed will be as directed by the IESO and can come from the Transmitter's controlling authority located at the Transmitter's territory operating centre.

The request for simulation will follow this model:

"To comply with directions from the IESO, this is the Transmitter's controlling authority calling. We are currently simulating a rotational load shed. Would you please simulate a load shed of X

MW's. Please inform me of your steps and the actual amount of the simulated load shed you are able to achieve."

The Customer's response will follow this model:

"I understand that the Transmitter Controlling Authority is simulating a Rotational Load Shed and that I am to simulate a load shed of X MW's. Is this correct?"

The Transmitter's controlling authority will confirm the request and both operators will remain on line to review procedure and collect Information.

A.9. Re-verification Schedules-Protection and Control (sample only)

A.9.1. A Customer shall re-verify its station protections and control systems that can impact on the Transmitter's transmission system.. The maximum verification or re-verification interval is: four (4) years for most of the 115 kV transmission system elements including transformer stations and transmission lines, and certain 230 kV transmission system elements; and two (2) years for all other high voltage elements. The maintenance cycle can be site specific.

A.9.2. Customer shall advise the Transmitter at least fourteen (14) business days' notice of its intention to conduct a reverification test, so that the Transmitter's protection and control staff and system performance staff (if required) can observe:

(a) re-verification of protection equipment settings specified in this Agreement;
(b) relay recalibration;
(c) test tripping of station breakers that impact on the Transmitter/Customer interface measurement and analysis of secondary AC voltages and currents to confirm measuring circuit integrity as well as protection directioning; and
(d) measurement and analysis of secondary AC voltages and currents to confirm measuring circuit integrity.

Note: All tests must be coordinated and approved ahead of time through the normal outage planning process.

A.9.3. The following specific actions are required:

(a) observe all station protections that trip and open the "enter the devices that interface with the Transmitter" for proper operation; and

(b) confirm that settings approved by the Transmitter are applied to the following protections:

(i) over and under voltage;

(ii) transformer differential;

(iii) transformer phase and ground backup protection;

(iv) line protections;

(v) breaker or HVI failure protection; and

(vi) transfer and remote trip protections.

A.10. General Protections (sample only)

1. There are no line protections at Site.

2. Transformer faults are cleared by the high voltage (HV) and medium voltage (MV) breakers.

3. The transformer protection sends a block to the Transmitter's network transformer station or switching station to prevent out of zone tripping.

4. Breaker failure protection sends transfer trip and it is then cascaded to other stations.

5. Under Frequency Load Shedding relays that operate as follows:

[Set out Particulars]

A.11. Telecommunication Facility Details for Protection and Control Applications (sample only)

A.11.1. Telecommunication Medium

The communication medium used will be two (2) leased telephone circuits from Bell Telephone and these circuits are the responsibility of the Customer

A.11.2. Types of Telecommunication Channels

2 Blocking Channels
2 Transfer Trip Channels

A.11.3. Ownership of Telecommunication Terminal Equipment

The terminal equipment located at a given facility is owned by the Customer. The communication medium (leased telephone circuits) is considered to be owned by the Customer. Therefore, the Customer is responsible for the restoration of the failed communication medium.

The terminal equipment located at a switching station is owned by the Transmitter.

A.11.4. Responsibility for Work and Costs Associated with Breakdown and Routine Maintenance

If maintenance is required on the terminal equipment located at the Customer's facility, the Customer will bear all incurred costs.

If maintenance is required on terminal equipment located at sites owned by the Transmitter, the Transmitter will bear all incurred costs.

If maintenance or repair is required on the leased telephone circuits, the Customer will incur all associated costs. These costs will include charges by Bell Telephone and the Transmitter if its personnel are required to participate in any of the related activities.

A.11.5. Reverification Schedule

Routine Maintenance on communication equipment and the communication channels must be performed every two years.

A.11.6. Inventory of Communication Equipment

The provision of spare communication equipment is the Customers' responsibility and will be located at its site.

A.11.7. Failure of Communication Equipment

If a communication failure affects either the transfer trip channels or the blocking channels; the Transmitter will decide whether or not the Customer should remain connected to the high-voltage system. The Transmitter must advise the Customer, through the appropriate communication protocol outlined in this code, of the situation, the choices available to the Customer and the risks involved. Since the Transmitter will take the decision according to its own interests, the Customer can choose to remain or separate from the high-voltage system at its own risk.

A.11.8. Mean Time for Repairs

The mean time for repairs will be within two working days, dependent on the availability of staff of Bell Telephone and the Transmitter.

A.11.9. Provision of Purchase Order by Customer to Transmitter

The Customer will provide the Transmitter's designated leader with a purchase order, so that the Transmitter may apply appropriate charges to the Customer.

SCHEDULE B

TRANSMISSION SERVICES AND ASSOCIATED CHARGES

B.1. This Schedule applies where the Customer's facilities are connected to those of the Transmitter's transmission facilities that form part of the IESO-controlled grid.

B.2. In this Schedule and in Attachment B1:

(a) the terms "Delivery Point" and "Network Service" shall have the meaning given to them in the Transmitter's Rate Order; and

(b) the terms "Registered Wholesale Meter", "Metering Registry" and "Metering Service Provider" shall have the meaning given to them in the Market Rules.

B.3. The Customer shall not be entitled to receive, and the Transmitter shall not be required to provide, any transmission services unless the Customer and the Customer's facilities comply with all applicable requirements of this Agreement and with all revenue metering and associated billing and settlement requirements of the Market Rules. Without limiting the generality of the foregoing, the Customer must provide the following information to the Transmitter:

(a) the identity of each Delivery Point associated with Customer's facilities, including the voltage supply level;

(b) a forecast of the Customer's demand at each such Delivery Point; and

(c) if applicable, the identity of each generation unit that is embedded relative to the Customer (determined in accordance with section J.1 of Schedule J) and the following information in respect of each such generation unit: (i) intstalled capacity; (ii) date on which all approvals required for installation of the generation unit were obtained; (iii) technology type; and (iv) fuel or generation source type.

B.4. Where the Customer wishes to obtain Export Transmission Service, the Customer shall arrange for and obtain that transmission service in accordance with the requirements of the Market Rules.

B.5. Charges for transmission services provided to the Customer shall be determined and billed in accordance with the Transmitter's Rate Order and the Market Rules.

B.6. Without limiting the generality of section B.5:

(a) transmission services shall be charged on the basis of the Delivery Point associated with the Customer's facilities;

(b) where there is more than one Delivery Point associated with the Customer's facilities, transmission services shall be charged individually for each Delivery

Point (with the result that the Customer's demand at multiple Delivery Points cannot be aggregated);

(c) where a Delivery Point associated with the Customer's facilities is also a Delivery Point for the facilities of an affiliate of the Customer, the demand at that Delivery Point may be aggregated if the facilities are on a single site or if the facilities are on adjacent sites owned by the Customer or by the Customer and an affiliate of the Customer; and

(d) charges for transmission service shall be calculated after taking account of site-specific losses as determined in accordance with the Market Rules.

B.7. Transmission service charges shall be paid by the Customer to the IESO in accordance with the Market Rules. A dispute related to an amount payable by the Customer to the IESO on account of transmission service charges that is subject to the dispute resolution provisions of the Market Rules shall be resolved in accordance with those provisions. Nothing in this section B.7 shall preclude a Customer from initiating a dispute under this Agreement in relation to the applicability of transmission service charges or the classification of transmission service charges.

B.8. The Customer shall notify the Transmitter in the event of a material change in any of the information referred to in section B.3 relative to the most recent information provided to the Transmitter.

B.9. The Parties may agree to use Attachment B1 or an amended version of Attachment B1 in connection with the payment of transmission service charges.

Attachment B1

Billing for Transmission Service Charges and Designation of Agent (as permitted by section B.9 of Schedule B)

As contemplated in the Transmitter's Rate Order, the IESO will submit invoices for transmission services to market participants that utilize Network Service or Export Transmission Service.

The Market Rules and the Transmitter's Rate Order require that transmission service charges payable by transmission customers shall be collected by the IESO. The billing and settlement processes used by the IESO are designed to collect transmission service charges from entities that are market participants, using meter readings that are totalized and loss adjusted. The Customer shall ensure that any Registered Wholesale Meter used for the purposes of determining transmission service charges payable by the Customer satisfy the wholesale metering requirements and associated obligations specified in Chapter 6 of the Market Rules (including the appendices to that Chapter).

The Customer may wish to designate to another entity that is a market participant (referred to as the "Transmission Customer Agent") the responsibility for paying some or all of the transmission service charges payable by the Customer and the responsibility for satisfying the wholesale metering requirements and associated obligations specified in Chapter 6 of the Market Rules (including the appendices to that Chapter). Any such designation shall be made on the basis of delivery points and associated connection points with respect to which the Customer has transferred the obligations to the Transmission Customer Agent.

Where the Customer wishes to so designate another entity as its Transmission Customer Agent, the Customer and the Transmission Customer Agent shall sign the form set out below and return it to the Transmitter. Once the designation takes effect, the transmission service charges payable by the Transmission Customer Agent will be calculated by the IESO as though the Transmission Customer Agent were the Customer with respect to the designated connection points at the applicable delivery points. Except as otherwise provided in section B.6 of Schedule B, the demand designated to the Transmission Customer Agent by the Customer shall not be aggregated with any demand for which (a) the Customer retains the obligation to pay transmission service charges, (b) the Customer designates the obligation to another entity, or (c) another customer of the Transmitter designates the obligation to the Transmission Customer Agent.

Transmission Customer Designation Form

The undersigned Customer hereby transfers to the undersigned Transmission Customer Agent, and the undersigned Transmission Customer Agent hereby assumes and agrees to honour, all obligations and responsibilities for each Registered Wholesale Meter and the payment of transmission service charges associated with the connection points listed below. This transfer of obligations and responsibilities is in accordance with Schedule B of the Connection Agreement between the Customer and the Transmitter. The undersigned Transmission Customer Agent hereby agrees to register as a market participant with the IESO and to be subject to all of the

requirements of the Market Rules for the purposes of payment of transmission service charges associated with the delivery points and associated connection points listed below. The Customer and the Transmission Customer Agent, as applicable, undertake to notify and oblige their respective Metering Service Provider(s) to ensure that the Metering Registry data maintained by the IESO in accordance with Chapter 6 of the Market Rules (including the appendices to that Chapter) is updated consistent with this designation.

List of delivery points and associated connection points for which obligations and responsibilities are transferred:

Delivery point	**Description of associated connection points**

On Behalf of Customer	On Behalf of Transmission Customer Agent
Signed: _____	Signed: _____
Title: _____	Title: _____
Date: _____	Date: _____
Business Name and Address:	Business Name and Address:
_____	_____
_____	_____
_____	_____
_____	_____

Received by Transmitter

Business Name: _____

Signed: _____

Title: _____

Date: _____

The designation contained herein shall become effective once the Metering Service Provider(s) for the Customer and the Transmission Customer Agent submit(s) the information required in accordance with the change management process for the Metering Registry maintained by the IESO.

SCHEDULE C

CURE PERIODS FOR DEFAULTS

C.1. The Cure Period for a Financial Default shall be:

(a) seven business days; or

(b) ten business days, where notice has been given to the Transmitter under section 19.4.1.

C.2. The Cure Period for a Non-financial Default shall depend on the impact of the Non-financial Default, determined by the Non-defaulting Party as follows:

Impact of Default	**Description**	**Cure Period**
Safety - Immediate	A Non-financial Default that could result in immediate injury or loss of life (e.g., exposed wires, destroyed station fence, etc.).	Promptly
Safety - Potential	A Non-financial Default that could result in injury or loss of life if a single contingency were to occur (e.g., substandard grounding)	Promptly
Environment – Immediate	A Non-financial Default that could result in immediate adverse effects on land, air, water, plants, or animals	Promptly
Asset Integrity	A Non-financial Default that could adversely affect the ability of an asset to operate within prescribed ratings (voltage, thermal, short circuit) or be maintained to required standards for the purpose of prolonging the lifespan of the asset or satisfying safety or environmental requirements	Promptly
Environmental - Potential	A Non-financial Default that could, if a single contingency were to occur, result in adverse effects on land, air, water, plants, or animals	30 days
Power Quality	A Non-financial Default that could result in a variation in electric power service that could cause the failure or improper or defective operation of end-use equipment, such as voltage sag, overvoltage, transients, harmonic distortion and electrical noise	30 days

C.3. Where a Non-financial Default can have more than one impact and the impacts have different Cure Periods, the shortest of the Cure Periods shall apply.

SCHEDULE D

FAULT LEVELS AND MODIFICATIONS REQUIRING APPROVAL BY THE TRANSMITTER

D.1. FAULT LEVELS

[to be completed by the Parties and updated as required, using Attachment D1 or an amended version of Attachment D1 if desired]

D.2. MODIFICATIONS REQUIRING APPROVAL BY THE TRANSMITTER

D.2.1. In accordance with sections 28.2.5 and 28.2.6, the following modifications to the Customer's facilities may not be made by the Customer without the prior approval of the Transmitter:

[to be completed by the Parties]

Attachment D1

Fault Levels
(as permitted by section D.1 of Schedule D)

Tariff Delivery Point	Supply Voltage (kV)	Tx Connection Point Number	Tx Connection Point	Fault Level (kA)

SCHEDULE E

GENERAL TECHNICAL REQUIREMENTS

1.1. Guidelines of Reliability Organizations

1.1.1. Customers and Transmitters shall follow all reliability organizations' standards as they may be amended from time to time.

1.1.2. The Transmitter shall provide to Customers upon request, the address and contact persons at the relevant reliability organization.

1.2. Isolation from the Transmission System

1.2.1. The Customer shall provide an isolating disconnect switch or device at the point or junction between the Transmitter and the Customer, i.e., at the point of the interconnection, which physically and visually opens the main current-carrying path and isolates the Customer's facility from the transmission system.

1.2.2. The isolating disconnect switch shall meet the following criteria:

1.2.2.1. it shall simultaneously open all phases (i.e., group-operated open/close) to the connection;

1.2.2.2. it shall be lockable in the open and closed positions;

1.2.2.3. when the device is used as part of the HVI failure protection system, it shall be motor-operated and equipped with appropriate control circuitry; and

1.2.2.4. it shall be suitable for safe operation under the conditions of use.

1.3. Protection and Control

1.3.1. The protection systems, which protects transmission system elements, shall be capable of minimizing the severity and extent of disturbances to the transmission system while themselves experiencing a first-order single contingency such as the failure of a relay protection system to operate or the failure of a breaker to trip. In particular:

1.3.1.1. the elements designated by the Transmitter as essential to system reliability and security shall be protected by two protection systems. Each system shall be independently capable of detecting and isolating all faults on those elements. These elements shall have breaker failure protection, but breaker failure protection need not be duplicated. Both protection systems shall initiate breaker failure protection;

1.3.1.2. to reduce the risk of both systems being disabled simultaneously by a single contingency, the protection system designs shall not use components common to the two systems;

1.3.1.3. the use of two identical protection systems is not generally, recommended, because it increases the risk of simultaneous failure of both systems due to design deficiencies or equipment problems;

1.3.1.4. the protection systems shall be designed to isolate only the faulted element. For faults outside the protected zone, each protection system shall be designed either not to operate or to operate selectively in coordination with other protection systems;

1.3.1.5. Customer protection settings for protections affected by conditions on the transmission system shall be coordinated with those of the transmission system;

1.3.1.6. protection systems shall not operate to trip for stable power swings following contingencies that are judged by protection system designers as not harmful to the transmission system or its Customers;

1.3.1.7. the components and software used in all protection systems shall be of proven quality for effective utility application and following good utility practice;

1.3.1.8. critical features associated with the operability of protection systems and the high voltage interrupting device (HVI) shall be annunciated or monitored;

1.3.1.9. the design of protection systems shall facilitate periodic testing and maintenance. Test facilities and procedures shall not compromise the independence of the redundant protection systems. Test switches shall be used to eliminate the need to disconnect wires during testing;

1.3.1.10. the two protection systems shall be supplied from separate secondary windings on one voltage transformer or potential device and from separate current transformer secondary windings, i.e., from two separate current transformers;

1.3.1.11. separately fused and monitored DC sources shall be used with the two protection systems. For all generating Facilities connected to the transmission system, two separate DC station battery banks shall be required to provide the required degree of reliability; and

1.3.1.12. protection system circuitry and physical arrangements shall be designed to minimize the possibility of incorrect operations from personnel error.

1.3.2. Specific protection and control practices and equipment requirements are set out in Schedule G of this Agreement.

1.3.3. Transmitters and Customers should apply protection systems, using the typical tripping matrix for transmission system protection shown in Exhibit E.2, of this Schedule E.

1.4. Insulation Coordination

1.4.1. Equipment connected to the transmission system shall be protected against lightning and switching surges. This shall include station shielding against direct lightning strokes, surge protection on all wound devices, and cable/overhead interfaces.

1.4.2. A tap connected to a shielded transmission circuit shall also be shielded.

1.4.3. The Transmitter shall review surge arrester ratings.

1.4.3.1. The Transmitter shall provide all relevant Information, e.g., ratings, to Customers upon request. The Transmitter, however is not responsible for the adequacy of design or correctness of the operation of any equipment or apparatus including the surge arrester(s).

1.5. Grounding

1.5.1. Grounding installations shall be capable of carrying the maximum foreseeable fault current, for the duration of such fault currents, without risking safety to personnel that may be present on site when a fault occurs, damage to equipment, or interference with the operation of the transmission system.

1.5.2. Each transformer, switching, or generating station shall have a ground grid on which all metallic structures, metallic equipment and non-energized metallic equipment are solidly connected. The size, type and requirements for the ground grid are site-specific, depending on such factors as soil conditions, station size, and short-circuit level.

1.5.3. The Transmitter shall review the ground potential rise (GPR) study submitted by the Customer at the Customer's cost. The Customer shall comply with the Bell System Practices as they may be amended or modified from time to time and the IEEE standard 487 as it may be amended or modified from time to time for providing special high-voltage protection devices on metallic communication cables. The Transmitter assumes no responsibility for the adequacy of design or correctness of the operation of any equipment or apparatus associated with the Customer's installation.

1.5.4. The placement of any additional grounding points on the transmission system shall require the approval of the Transmitter. The Transmitter shall give its approval if it is satisfied that the reliability of its transmission system is not affected.

1.6. Telemetry, Monitoring, and Telecommunications

1.6.1. Transmitters shall advise Customers of the performance and details of required telemetering facilities that serve them. Some requirements depend on the size and specific location of the connection to the transmission system. As a minimum, telemetry shall be required for the flow of real and reactive power through circuits and transformers, the voltages at selected points, and the status (open or closed) of switching elements.

1.6.2. A Transmitter may require a Customer to install monitoring equipment to track the performance of its facilities, identify possible protection system problems, and provide measurements of power quality. The responsibility for costs will be as determined by the Board. As required, the monitoring equipment shall perform one or several of the following functions:

1.6.2.1. sequence of events recording (SER) to record protection related events at a connection;

1.6.2.2. digital fault recording (DFR) to permit analysis of transmission system performance under normal and abnormal conditions; or

1.6.2.3. power quality monitoring (PQM) to record voltage transient surges, voltage sags and swells, voltage unbalance, supply interruptions, frequency variations and other voltage and current waveform monitoring.

1.6.3. Customers' telecommunications facilities shall be compatible with those of the Transmitter and have similar reliability and performance characteristics. At the Transmitter's discretion, some or all of the following functions may require telecommunication: protective relaying; system control and data acquisition (SCADA); voice communication; and special protection systems (e.g., generation rejection or runback).

1.6.4. Telecommunication facilities, design details, and performance requirements, associated with Customers' facilities, shall be provided at the Customer's expense.

1.6.5. The Customer shall bear all costs, without limitation, of providing the same telemetry data required under the Market Rules, associated with its facilities to the Transmitter and providing all required connection inputs to the Transmitter's disturbance-monitoring equipment, except:

1.6.5.1. where the connection inputs to the Transmitter's disturbance-monitoring equipment are of mutual benefit to the Customer and the Transmitter, in which circumstance the Customer and Transmitter shall share the cost of providing the data in proportion to the benefits received; or

1.6.5.2. where the connection inputs to the Transmitter's disturbance-monitoring equipment are required only for the Transmitter's benefit, in which case the transmitter shall pay all of the costs associated with providing the data.

1.7. Inspecting and Commissioning Procedures

1.7.1. Customers shall ensure that any new or replacement equipment that they own is inspected and tested before initial connection to the transmission system. The initial verification tests shall confirm that the connection of the Customer's facility to the transmission system:

1.7.1.1. does not pose any safety hazards;

1.7.1.2. does not adversely affect operation of the transmission system in a material manner; and

1.7.1.3. does not violate any requirement of the Code or this Agreement.

1.7.2. The Transmitter has the right to inspect the Customer's facility and witness commissioning tests related to any new or replacement equipment that could reasonably be expected to adversely affect the transmission system. The initial verification shall include high-voltage interrupting devices, line disconnect switches, the line and bus connections from the dead-end structure to Customer's facility, power transformers, surge arresters, DC batteries, and station service systems, protection, metering, and communication systems. The Customer shall have the right to the inspection reports relating to such facility.

1.7.3. The Transmitter assumes no responsibility for the adequacy of design or correctness of the operation of any equipment or apparatus associated with the Customer's installation. The Transmitter shall notify the Customer of its findings regarding any potential problems or limitation of such equipment or apparatus owned by the Customer, without any responsibility.

1.7.4. The Customer shall advise the Transmitter of the commissioning program in writing, thirty business days before it proposes to begin the commissioning tests. The written notice shall include the connection commissioning schedule, the proposed test procedure, the test equipment to be used, and the transmission system conditions required, and also the name of the individual responsible for coordinating the proposed tests on the Customer's behalf.

1.7.5. Within fifteen business days of receiving the notice, the Transmitter shall notify the Customer that it:

1.7.5.1. agrees with the proposed connection commissioning program and test procedures; or

1.7.5.2. requires changes in the interest of safety or maintaining the reliability of the transmission system, and that such changes shall be sent to the Customer promptly.

1.7.6. If the Transmitter requires changes, then the Parties shall act in good faith to reach agreement and finalize the commissioning program within a reasonable period.

1.7.7. The Customer shall submit the results of the commissioning tests to the Transmitter and must demonstrate that all its equipment complies with the Code and this Agreement.

1.7.8. If the commissioning test reveals non-compliance with one or more requirements of the Code or this Agreement, the Customer whose equipment was tested shall promptly meet with the Transmitter and agree on a process aimed at achieving compliance.

1.7.9. The Transmitter may withhold permission to complete the commissioning and subsequent connection of the Customer to the transmission system if the relevant equipment fails to meet any technical requirement stipulated in the Code or this Agreement.

1.7.10. All reasonable costs incurred or associated with Transmitter's witnessing of the verification tests shall be borne by the Customer.

1.8. Procedures for Maintenance and Periodic Verification

1.8.1. The Transmitter, using good utility practice, may specify the maintenance criteria and the maximum time intervals between verification cycles for those parts of Customers' facilities that may materially adversely affect the transmission system. The obligations for maintenance and performance re-verification shall be stipulated in the appropriate schedule to this Agreement.

1.8.2. Test switches shall be provided to isolate current and potential transformer input to the relays as well as a set of switches to isolate the relays tripping outputs from the power equipment control circuitry.

1.8.3. The reasonable cost of conducting maintenance and verification tests shall be borne by the Customer.

1.8.4. The Transmitter may appoint a representative to witness relevant maintenance and verification tests and the Customer shall permit the representative to be present while those tests are being conducted.

1.8.5. To ensure that the Transmitter's representative can witness the relevant tests, the Customer shall submit the proposed test procedures and a test schedule to the Transmitter not less than ten business days before it proposes to carry out the test. Following receipt of the request, the Transmitter may delay for technical reasons the testing for as long as ten business days. The Transmitter will use best efforts to make the required test date.

1.8.6. The reasonable costs associated with the witnessing of verification tests by the Transmitter's representative shall be borne by the Customer.

1.8.7. If a verification test reveals that the electrical equipment or protective relay system covered under the operations schedule does not comply with requirements, the Customer shall:

1.8.7.1. promptly notify the Transmitter of that fact;

1.8.7.2. promptly advise the Transmitter of its proposed remedial steps and its timetable for their implementation;

1.8.7.3. diligently undertake appropriate remedial work and provide the Transmitter with monthly reports on progress; and

1.8.7.4. conduct further tests or monitoring on completing the remedial work, to confirm compliance with the relevant technical requirements.

1.8.8. The Transmitter's reasonable costs associated with witnessing the performance tests following remedial work shall be borne by the Customer.

1.8.9. Customers shall make their maintenance records and verification test results, including up-to-date as-built drawings, available to the Transmitter upon request.

SCHEDULE E (CONT'D)

Exhibit E.1 Protection System Symbols and Devices

Protection Systems - Symbols and Device Functions

51B	Transformer Phase Backup
50 / 51	Instantaneous / Timed Overcurrent
51V	Voltage Controlled Overcurrent
64	Line Ground Protection
79-25	Synchronizing Relay
A21 / B21	Line Phase Protection - A&B Group
A27 / B27	Undervoltage - A&B Group
A59 / B59	Overvoltage - A&B Group
A64-27 / B64-27	Ground Undervoltage - A&B Group
A64-59 / B64-59	Ground Overvoltage - A&B Group
A81U / B81U	Underfrequency - A&B Group
A81O / B81O	Overfrequency - A&B Group
A87 / B87	Transformer Differential - A&B Group
F	Failure Protection
L1, L2	Supply Line
T1, T2	Power Transformer
RT/TT	Remote or Transfer Trip for HVI Device Failure Protection
	Circuit Breaker
	Circuit Breaker with Reclosure
	HV Interrupting Device a) Circuit Breaker b) Circuit Switcher c) Vacuum Interrupter
	Motor Operated Disconnect Switch
	HV Transformer Bushing
	LV Transformer Bushing

SCHEDULE E (CONT'D)

Exhibit E.2 Typical Transmission System Protection Tripping Matrix

The following is a simplified tripping matrix showing the breakers that trip for different protection systems on the transmission system based on a single line supply to a Customer station or a transmitter's tapped transformer station operating, at the high voltage side, above 50 kV 50kV. The type of Customer (i.e., load or Generator) station configuration and other site-specific factors will influence the desired tripping matrix. The same approach can be applied to large 44-kV developments. In some applications, it may be desirable to trip the MV breaker for Line ZI/T operations instead of the HV Breaker.

	INITIATING PROTECTION							
PROTECTION FUNCTION	LINE ZI	LINE ZT	T T R LOCAL	XFRM	BUS	B/F HV	FRAME LEAK *	B/F MV
TRIP HV BREAKERS	T	T		T	T	T	T	T
HV BREAKER FAILURE	I	I		I	I			
HV AUTO-RECLOSE	C	C		C	C	C	C	C
TRIP MV BREAKERS			T	T	T	T	T	T
MV BREAKER FAILURE			I	I	I		I	
MV AUTO-RECLOSE					C	C	C	C
TTT	S					S	S	
OPEN XFR DISC				I				
TRIP ADJACENT HV ZONES						I		
TRIP ADJACENT MV ZONES								I

T – trip breakers
I – initiate
C – cancel
S – send signal
HV – high voltage

TTR/T – transfer trip receive/transmit
ZI/T – impedance instantaneous/timed
B/F – breaker failure

MV – medium voltage

* - Frame leakage protection is normally associated with 500kV breakers

All transmission system elements, including breakers, in the zones of protection shall be fitted with redundant protection systems if devices operated at more than 50 kV, except as noted.

All breakers in the zone of protection that includes devices operated at more than 50 kV shall be fitted with the non-redundant breaker failure-protection systems. Transmission system reliability, as determined by the IESO, may require breaker failure protection on the transformer MV breaker.

The Customer must be able to isolate (self-contain) his internal problems without having a major impact on the transmission system. Under certain circumstances, HV breakers may not be required for load Customer step-down transformers, provided that a motorized disconnect switch and redundant communication channels and paths are provided to isolate the transformer at the terminal stations if a fault occurs in the transformer zone of protection.

Medium-voltage buses require either duplicated differential protection or a single differential protection with an overcurrent backup.

SCHEDULE F
ADDITIONAL TECHNICAL REQUIREMENTS FOR TAPPED TRANSFORMER STATIONS SUPPLYING LOAD:

(a) Transmitter's Tapped Transformer Stations; and
(b) Distributor's and Consumer's Tapped Transformer Stations

1.1. Supply Considerations

1.1.1. A high-voltage interrupting (HVI) device shall provide clearing of faults in the load Customer's system. HVIs shall be provided with appropriate back-up protection. The HVI shall be a circuit breaker located at the connection point unless the Transmitter authorizes another device or location.

1.1.2. The Transmitter shall determine, in consultation with its Customers, the supply voltage to the Customer. The 115 kV or 230 kV voltage shall be generally used for supply of Customers with a peak demand of 20 MW or more.

1.1.3. Tapped transformers of Transmitters, Consumers or Distributors, excluding those that are deemed compliant under section 4.6 of the code, shall have adequate on-load tap-changer or other voltage-regulating facilities to operate continuously within normal variations on the transmission system as set out in the Market Rules and to operate in emergencies with a further transmission system voltage variation of ± six per cent (± 6%).

1.1.4. The neutrals of the power transformer primary windings at transmission system tapped stations are normally not grounded. Transmitters shall approve grounded transformers by exception only.

1.1.5. Consumers and Distributors shall participate in load shedding to meet reliability standards.

1.1.6. A transmission system breaker of a Consumer or Distributor shall not autoreclose without Transmitter's approval.

1.1.7. A Consumer or a Distributor shall not manually energize a Transmitter's line without the Transmitter's approval.

1.1.8. To meet the minimum general requirements for all equipment connected to the transmission system, a Customer may have to install any necessary equipment, including, for example, capacitors and filters.

1.2. Protection Requirements

1.2.1. The typical technical requirements for Distributor and Consumer protection shall be followed, as presented in Exhibit E.1 of Schedule E and Exhibits F.1 and F.2 of this Schedule F.

1.2.2. Line protections are required when transformers connected to separate supply circuits are operated in parallel on the low-voltage side, or if a large synchronous infeed exists at the low-voltage bus.

1.2.3. Directional current sensing relays may be required to detect infeed into faults within the transmission system and isolate the Customer's contribution to the fault. Distance or impedance (21) relays as specified in Exhibit F.2 of this Schedule F, usually serve this need.

1.2.4. If the transformer is connected ungrounded wye or delta on the primary, then ground undervoltage (64-27) and ground overvoltage (64-59) protections as shown in Exhibit F.2 of this Schedule F are required to detect ground faults.

1.2.5. Where the Transmitter has accepted transformers connected wye-grounded on the primary (Yg/D or Yg/Yg), a ground-overcurrent relay (64) as indicated in Exhibit F.2 of this Schedule F, connected in the transformer neutral, may be used for detection.

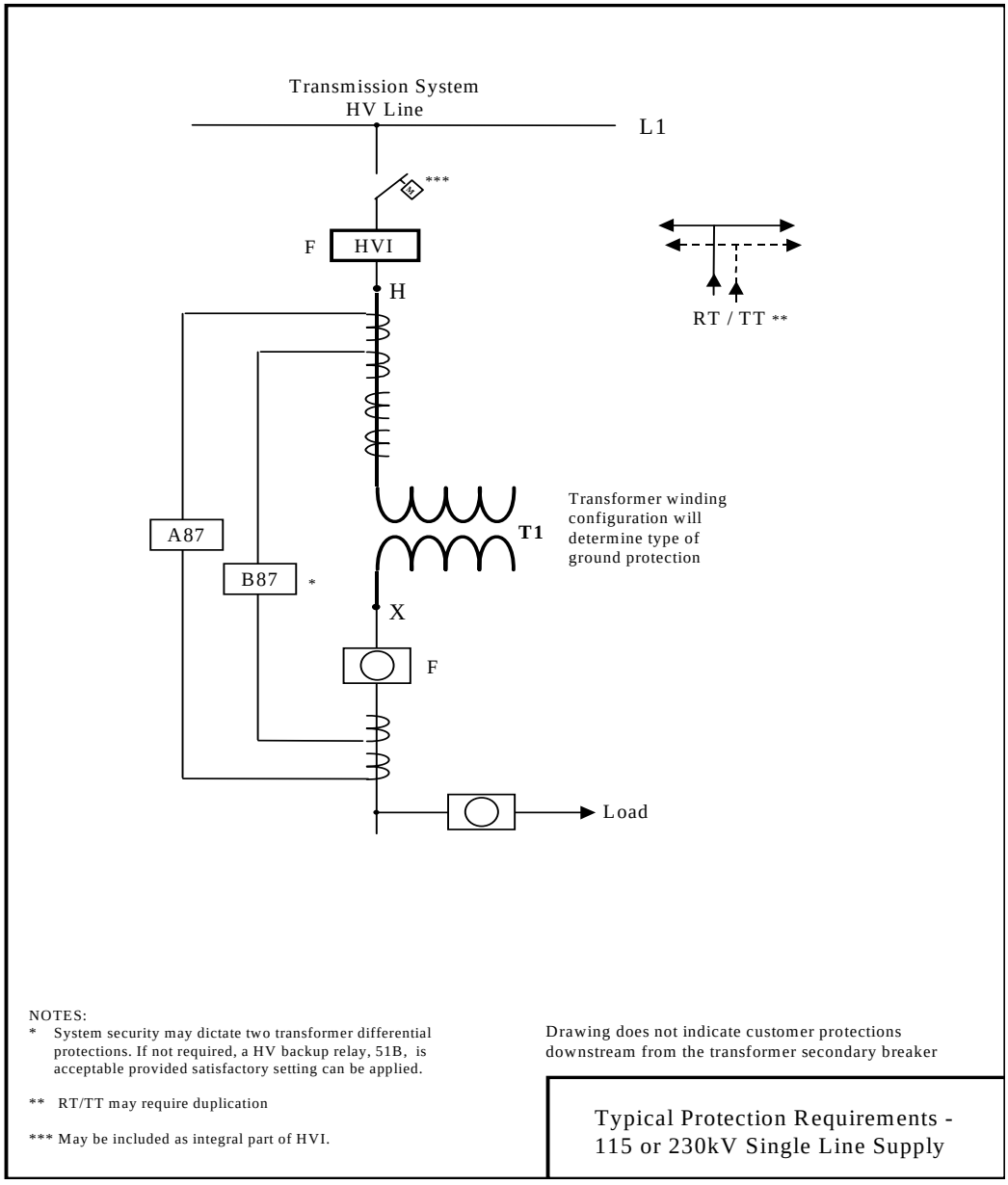
1.2.6. Where remote/transfer trip circuits are used for transformer faults to trip the Transmitter's line breakers at the terminal stations, the Customer shall use a motor-operated transformer disconnect switch at its station to provide a point of separation from the transmission system. Energization of remote/transfer trip and opening of the disconnect switch (89) shall be initiated simultaneously from the protection circuits. Full opening of the disconnect switch shall block sending of remote trip.

1.2.7. For a DC remote trip on a 115-kV system, the Customer shall provide all necessary equipment associated with one monitored teleprotection channel between its station and one of the supply terminal stations or tapped stations. Industry standard relays and associated equipment that is compatible with the Transmitter's remote trip equipment shall be used. A 115-kV transfer trip shall have a similar requirement, except that audio-tone equipment shall be used instead of the DC battery voltage.

1.2.8. For a DC remote trip on a 230-kV system, the Customer shall provide all necessary equipment associated with two monitored teleprotection channels between its station and one of the supply terminal stations or tapped transformer stations. Normally two circuits in the same cable would be acceptable, but two separate cables going by and following separate routes may be required. The Customer shall use industry standard relays and associated equipment that is compatible with the Transmitter's remote trip equipment. A 230-kV transfer trip shall have a similar requirement, except that audio-tone equipment shall be used instead of the DC battery voltage.

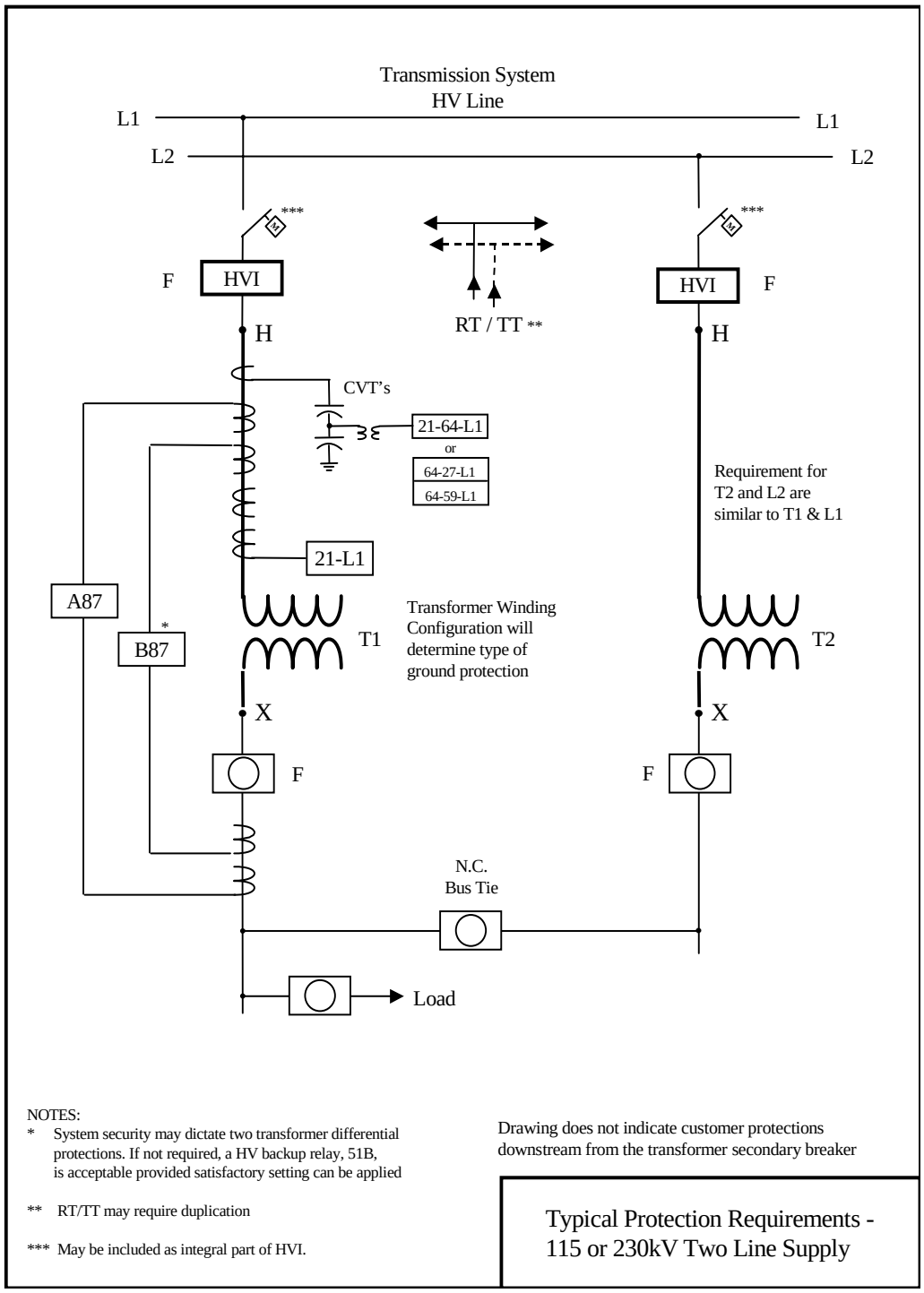
SCHEDULE F (CONT'D)

Exhibit F.1 Typical Single-Line Protection Requirements



SCHEDULE F (CONT'D)

Exhibit F.2 Typical Two Line Protection Requirements



NOTES:

* System security may dictate two transformer differential protections. If not required, a HV backup relay, 51B, is acceptable provided satisfactory setting can be applied

** RT/TT may require duplication

*** May be included as integral part of HVI.

Drawing does not indicate customer protections downstream from the transformer secondary breaker

Typical Protection Requirements - 115 or 230kV Two Line Supply

SCHEDULE G

PROTECTION SYSTEM REQUIREMENTS

1.1. Telecommunications

1.1.1. The telecommunication facilities, used for protection purposes, shall have a level of reliability consistent with the required performance of the protection system.

1.1.2. Transmitters shall specify telecommunication channel media and protective systems.

1.1.3. Telecommunication circuits used for the protection and control of the transmission system shall be dedicated to that purpose.

1.1.4. Where each of the dual protections protecting the same system element requires communication channels, the equipment and channel for each protection shall be separated physically and designed to minimize the risk that both protections might be disabled simultaneously by a single contingency.

1.1.5. Telecommunication systems shall be:

1.1.5.1. designed to prevent unwanted operations such as those caused by equipment or personnel;

1.1.5.2. powered by the station's batteries or other sources independent from the power system; and

1.1.5.3. monitored in order to assess equipment and channel readiness.

1.1.6. Major disturbances caused by telecommunication failures shall have annual frequency of less than 0.002 per year from the dependability aspect and less than 0.002 per year from the security aspect.

1.1.7. Telecommunication protection for a single transmission system circuit shall have an unavailability less than forty two (42) minutes per year, and for two circuits it shall be less than four (4) minutes per year.

1.1.8. The telecommunication false-trip rate used as part of a protection system for a single transmission system circuit shall be not more than 0.1 false trips per year, and for two circuits it shall be not more than 0.001 false trips per year.

1.1.9. Total transmission system circuit trips coincident with telecommunications failure shall be not more than 0.001 per year.

1.2. Test Schedule for Relaying Communication Channels

1.2.1. Communication channels associated with protective relaying shall be tested at periodic intervals to verify that the channels are operational and that their characteristics lie within

specific tolerances. The testing consists of signal adequacy tests and channel performance tests.

1.2.1.1. Signal adequacy test intervals are:

1.2.1.1.1. Channels - for Protection (unmonitored) at one (1)-month intervals; and

1.2.1.1.2. Channels - for Protection (monitored) at twelve (12)-month intervals.

1.2.1.2. Channel performance testing on leased communication circuits shall be conducted at 24-month intervals, while intervals for testing power line carrier equipment shall be equipment-specific.

1.3. Verification and Maintenance Practices

1.3.1. Customers shall perform routine verifications of protection systems on a scheduled basis in accordance with applicable reliability standards. The maximum verification interval is four years for most 115-kV elements, most transformer stations, and certain 230-kV elements and two years for all other high- voltage elements. All newly commissioned protection systems shall be verified within six months of the initial in-service date of the system.

1.3.2. Routine verification shall ensure with reasonable certainty that the protections respond correctly to fault conditions.

1.3.3. An electrically initiated simulated-fault clearing check is mandatory to verify new protections, after any wiring or component changes are made to a protection, and for routine verification of a protection.

1.3.4. Customers shall ensure that the functional testing of protection and metering can be properly performed and that all verification readings are obtainable.

1.3.5. The Transmitter shall co-ordinate the initial verification upon receipt of the approved and final set of drawings. The initial verification shall be used during the final commissioning phase of the station and shall be used as a basis for future periodic verifications.

1.3.6. Transmitters and Customers shall agree upon the final functional test procedures before the tests begin. If they cannot agree, the supply or continuity of supply shall depend on the performance of the tests that the Transmitter shall require.

1.3.7. Before the initial functional tests are performed, the Customer shall supply the Transmitter with written documentation that shall readily provide confirmation that appropriate verifications have been completed and that all calibrations, tests, etc., have been performed. For components that may affect the transmission system (such as relays, meters, etc.), the Customer must satisfy the Transmitter that the proper settings have been applied.

1.3.8. Customers shall make available to the Transmitter records of relay calibrations and protection verifications, so that records of the facility's performance can be maintained. The specific records required shall be identified in this Agreement.

1.4. Functional Tests and Periodic Verification

1.4.1. Upon verification that the Customer's static tests on protection and control equipment, outlined in the Code and this Agreement, have been satisfactorily completed, a series of tests shall be performed with the equipment in a dynamic mode. These tests shall ensure that the equipment performs correctly when it should and also that it will not operate improperly.

1.4.2. These tests are here described only in general terms, since the specific tests to be performed will differ depending on the particular station configuration, the components or equipment used, and the design philosophy of the circuitry.

1.4.3. For DC circuitry checks, the logic of the auxiliary circuitry shall be thoroughly checked with the DC applied and the initiating devices suitably energized to initiate the process. When primary relays are the initiating device, the initiation shall be achieved by secondary injection of appropriate electrical quantities to the measuring elements. In certain cases where the sequence of operation is critical, monitoring by a portable sequence-of-events recorder may be required for proper analysis. Operation/tripping of all interrupting/isolating devices shall always be verified, as well as annunciation and target operation.

1.4.4. "On potential" checks shall follow all necessary preliminary procedures. The main equipment shall be energized but not placed on load. The Customer shall check all readings of potentials, including determination of correct phasing/phase rotation. The test must also demonstrate that all equipment performs as expected when energized and is in condition to have primary load applied.

1.4.5. Customers shall make "On-Load" checks following the application of appropriate load, voltage, current, phase angle or crossed wattmeter readings at the appropriate instrument transformer outputs or protection input points, to ensure that all quantities are appearing as required with respect to magnitude, phase relation, etc. These checks are to determine that relays are properly connected and that the watt and var checks of all indicating and referenced equipment are correct. At times it may be necessary to repeat some or all tests, e.g., relay performance, using load currents.

1.5. Failure Protection for High-Voltage Interrupting Devices (HVIs)

1.5.1. Provisions shall be made to clear the fault in case the HVI fails to isolate the fault. The requirements for HVI failure protection vary depending on the maximum permissible fault duration and the location of the connection on the transmission system. Some portions of the transmission system are designed and operated to more stringent requirements to avoid adversely affecting neighbouring transmission systems.

1.5.2. In general, the transmission system will require the HVI failure protection to be achieved by using remote or transfer trip circuits.

1.5.3. In portions of the transmission system having less stringent requirements, the HVI failure protection may be achieved by opening the motor-operated disconnect switch. If the disconnect switch experiences a flashover, the line protection at the transmission station(s) shall operate to isolate the fault.

1.5.4. Automatic ground switches are not acceptable for any new installations for triggering line protection operation following the failure of a HVI.

1.5.5. When circuit switchers are used, the interrupter and disconnect switch shall operate independently. Protections that trip the interrupter shall simultaneously initiate opening of the disconnect switch.

1.5.6. The DC voltage supplied to the interrupter and disconnect switch shall be fed from separately fused and monitored DC supplies: that is, by two (2) DC cables to the control cabinet.

1.6. Instrument Transformers

1.6.1. Current transformer output shall remain within acceptable limits for all anticipated fault currents and for all anticipated burdens connected to the current transformer.

1.6.2. Current transformers shall be connected so that adjacent relay protection zones overlap.

1.6.3. Voltage transformers and potential devices shall have adequate volt-ampere capacity to supply the connected burden while maintaining their accuracy over the specified primary voltage range.

1.6.4. For each independent protection system, separate current and voltage transformer or potential device secondary windings shall be used, except on low-voltage devices.

1.6.5. Interconnected current transformer secondary wiring and voltage transformer secondaries shall each be grounded at only a single point.

1.7. Battery Banks and Direct Current Supply

1.7.1. The Customer shall ensure that if either the battery charger fails or the AC supply source fails, the station battery bank shall have enough capacity to allow the station to operate for at least eight hours for a single battery system or at least six hours for each of the batteries in a two battery system.

1.7.2. Critical DC supplies shall be monitored and annunciated such as relay protection circuits and high voltage interrupters (HVIs).

1.7.3. For all generating facilities connected to the transmission system, two separately protected (fuse/breaker) and monitored DC station battery systems are required.

1.7.4. For tap transformer stations, one protected (fuse/breaker) monitored DC station battery system is required unless two systems are specified by the Transmitter.

1.7.5. Where two battery systems are required, there shall be a battery transfer scheme.

1.7.6. Where the use of a single battery system is allowed, the following conditions shall be met:

1.7.6.1. it can be tested and maintained without removing it from service;

1.7.6.2. each protection system shall be supplied from physically separated and separately fused direct current circuits; and

1.7.6.3. no single contingency other than failure of the battery bank itself shall prevent successful tripping for a fault.

SCHEDULE H
FACILITIES DEEMED COMPLIANT

H.1. IDENTITY OF DEEMED COMPLIANT FACILITIES

H.1.1. The following Customer facilities are deemed compliant in accordance with section 4.6.1 of the Code:

[to be completed by the Parties, including identity of the facilities and the extent of non-compliance]

H.1.2. The following Transmitter's transmission facilities are deemed compliant in accordance with section 4.6.1 of the Code:

[to be completed by the Parties, including identity of the facilities and the extent of non-compliance]

H.2. COMING INTO COMPLIANCE

H.2.1. The Transmitter may, where the Board has approved its rules and procedures referred to in section 4.6.3 of the Code, require that some or all of the Customer's facilities to which section 4.6.1 of the Code applies be brought into actual compliance with the basic general performance standards and technical requirements set out in the Code, including in Appendix 2. The Transmitter may impose this requirement in relation to such facilities whether or not they are identified in section H.1.1. The Transmitter may impose this requirement only:

(a) in relation to that portion of the Customer's facilities in respect of which the Transmitter has made a determination referred to in section 4.6.2 of the Code; and

(b) in accordance with the Transmitter's Board-approved rules and procedures referred to in section 4.6.3 of the Code.

H.2.2. The Customer shall, upon being required by the Transmitter to do so under section H.2.1, bring its facilities into actual compliance with the basic general performance standards and technical requirements set out in the Code, including in Appendix 2, to the extent required by the Transmitter and in accordance with the rules and procedures referred to in section H.2.1(b). Responsibility for the costs of bringing such facilities into actual compliance shall be determined in accordance with the Transmitter's Board-approved rules and procedures referred to in section 4.6.3 of the Code.

H.2.3. Where Customer facilities are brought into actual compliance under section H.2.2, the Parties shall amend section H.1.1 as required.

H.2.4. Where the Transmitter's transmission facilities are brought into actual compliance, the Parties shall amend section H.1.2 as required.

SCHEDULE I

EXCHANGE OF INFORMATION

I.1. INFORMATION TO BE PROVIDED BY THE TRANSMITTER

I.1.1. Subject to section I.1.2, the Transmitter shall, at the Customer's request, provide the following information to the Customer provided that such information is available at the relevant time:

(a) feeder amperes per phase;

(b) bus voltage;

(c) real and reactive power flow per feeder (where available; otherwise per bus level);

(d) feeder breaker open/close status;

(e) feeder breaker recloser blocked/not blocked status;

(f) bus tie breaker open/close status;

(g) capacitor bank breaker open/close status; and

(h) transformer/bus breaker open/close status.

I.1.2. The Customer shall be entitled to the information referred to in section I.1.1 only to the extent that:

(a) the information relates specifically to the connection of its own facilities;

(b) the information is relevant to the connection of its own facilities; and

(c) the Transmitter is not prohibited by its confidentiality obligations as set out in the Code or its licence from providing that information to the Customer.

I.1.3. The Transmitter shall provide the Customer with the following additional information:

(a) at the Customer's request, a "relay and breaker trip report" for any operation of a breaker or transfer trip relay and that includes the date and time of the breaker or transfer trip operation and reclose or close, the cause of the incident if known and the quantity of load lost;

(b) megawatt and megavar readings, excluding revenue-metered quantities; and

(c) [any additional information items as determined by the Parties to be required based on site specific considerations]

I.1.4. A Transmitter may provide information under section I.1.1 or I.1.3 by means of posting the information on a website that is dedicated to the Customer.

I.2. INFORMATION TO BE PROVIDED BY THE CUSTOMER

I.2.1. To the extent that it has not already been provided to the Transmitter, the Customer shall provide the Transmitter with the same technical information provided to the IESO during any connection assessment and facility registration process associated with the Customer's facilities or any new, modified or replacement Customer Facilities. Such information shall be provided in the form outlined in the connection assessments section on the IESO's public website.

I.2.2. The Customer shall provide the Transmitter with updated versions of the technical information referred to in section I.2.1 in the event of a material change in such information.

I.2.3. The Customer shall provide the Transmitter with such information as the Transmitter may reasonably require in order to perform a Customer Impact Assessment.

I.2.4. To the extent that it has not already been provided to the Transmitter under another section of this Agreement or is not reasonably expected to already be known by the Transmitter, the Customer shall provide the Transmitter with the date and time at which the Customer's facilities are connected or reconnected to, or disconnected from, the Transmitter's transmission facilities.

I.2.5. The Customer shall notify the Transmitter in the event that its facilities are not being operated or maintained in accordance with the requirements of this Agreement.

I.2.6. The Customer shall provide the Transmitter with the following additional information:

(a) the date and time at which any of the Customer's supply circuit breakers or high voltage interrupting switches automatically trips;

(b) information pertaining to the operation of any of the Customer's automatic protective relays that has an impact on the Transmitter's transmission facilities;

(c) changes in the Customer's operating setup or operating diagrams relative to the information contained in Schedule A or any updates or amendments thereto;

(d) at the Transmitter's request, line and load data required for protective relay settings;

(e) at the Transmitter's request, protective relay settings on equipment protection systems; and

(f) at the Transmitter's request, annual facility performance data as may be required to enable the Transmitter to meet its reporting obligations to any reliability organization.

I.3. INFORMATION TO BE PROVIDED BY EITHER PARTY

I.3.1. Each Party shall provide the other with the following information:

(a) any temporary or permanent changes in the configuration of the Party's facilities that may affect the security of those facilities, load distribution, protective relay settings or other parameters;

(b) details of defective equipment or hazardous conditions that may become known to the Party's Controlling Authority but not to the Controlling Authority of the other Party;

(c) planned changes in the Party's facilities that affects the operation of those facilities; and

(d) such other information as the other Party may reasonably require for the purpose of fulfilling its obligations under this Agreement.

I.3.2. Where applicable, the Parties shall amend Schedule A to reflect any information provided by a Party to the other under this Schedule.

SCHEDULE J
EMBEDDED GENERATION, BYPASS, ASSIGNED CAPACITY AND TRUE-UPS

J.1 EMBEDDED GENERATION

J.1.1 The Transmitter shall, for all purposes, treat a generation facility as embedded generation in relation to the Customer as required by section 11.1.1 or 11.1.2 of the Code.

J.1.2. The Transmitter shall not, for any purposes, treat a generation facility as embedded generation in relation to the Customer as required by section 11.1.3 or 11.4 of the Code.

J.1.3. The reference to "for all purposes" in section J.1.1 and to "for any purposes" in section J.1.2 includes the purpose of determining whether bypass compensation is required to be paid by the load customer and the purpose of determining the manner in which network charges will be applied.

J.2 BYPASS

J.2.1. Where the Customer disconnects its facilities from the Transmitter's connection facilities in the circumstances described in section 11.2.1 of the Code, the Customer shall pay bypass compensation to the Transmitter, determined in accordance with section 11.2.1 of the Code.

J.2.2. The Customer may:

(a) disconnect its facilities from the Transmitter's connection facilities for the purpose of subsequently connecting its facilities to its own connection facilities or to connection facilities owned by a person other than the Transmitter; or

(b) transfer load from the Transmitter's connection facilities to its own connection facilities or to connection facilities owned by a person other than the Transmitter.

In such a case and unless section J.2.3 or section 6.7.8 of the Code applies, the Customer shall pay bypass compensation to the Transmitter, determined in accordance with section 6.7.7 of the Code.

J.2.3. The Customer shall not be required to pay bypass compensation under section J.2.2 in relation to any load that is transferred by the Customer to its own connection facilities or to connection facilities owned by a person other than the Transmitter that:

(a) would, if it remained on the Transmitter's connection facilities, overload those facilities beyond their normal supply capacity as determined in accordance with the Board-approved procedure referred to in section 6.2.7 of the Code or, in the absence of such Board-approved procedure, in accordance with section 6.1.8 of the Code; or

(b) is new load, determined in accordance with section 3.0.3 of the Code.

J.2.4. Notwithstanding any other provision of this Schedule J, in no event shall the Transmitter require the Customer to pay any bypass compensation for any reduction in the Customer's load served by the Transmitter's connection facilities that the Customer has demonstrated to the reasonable satisfaction of the Transmitter (such as by means of an energy study or audit) has resulted from embedded renewable generation, energy conservation, energy efficiency or load management.

J.2.5. The Customer shall give the Transmitter no less than one years' notice of the Customer's intention to bypass the connection facilities of the Transmitter.

J.3. LOAD FORECAST AND CHANGES IN LOAD

J.3.1. Where an economic evaluation was conducted in relation to the connection of the Customer's facilities, the following shall be set out in Attachment J1:

(a) the load forecast provided by the Customer that was used for the purposes of that economic evaluation; and

(b) the Customer's load shape provided by the Customer, in such detail as to enable the Transmitter to appropriately assess the Customer's system requirements.

J.3.2. The Customer shall, no later than October 1st of each year, notify the Transmitter of any anticipated material increase or decrease in:

(a) the Customer's load in relation to each connection point during the following year; and

(b) the Customer's summer peak demand or winter peak demand for each Delivery Point (as defined in Schedule B).

This obligation applies regardless of whether section J.3.1 applies in respect of the Customer. Where this section applies by virtue of the application of section 3.0.7 of the Code, the Customer shall not be required to comply with this obligation until October 1st of the calendar year that commences after the Code revision date.

J.3.3. Where the Customer provides a load forecast for any purpose under this Agreement, the Customer shall ensure that the load forecast is as accurate as possible and reflects, where applicable, reductions in load that are reasonably expected to result from renewable embedded generation (determined in accordance with section 11.1 of the Code), energy conservation, energy efficiency or load management).

J.4. ASSIGNED CAPACITY

J.4.1. The Customer's assigned capacity on each applicable connection facility shall be determined in accordance with section 6.2.2 of the Code and shall be recorded by the Parties in Attachment J2. The Parties shall update that table from time to time as may be required, and may do so by having the Transmitter post updated versions of the table on a website dedicated to the Customer.

J.4.2. The Customer's contracted capacity on each applicable connection facility shall be determined in accordance with section 6.2.3 of the Code.

J.4.3. Where, after the date of coming into force of this Agreement, the Customer requires capacity on a connection facility to serve load that is new load as determined in accordance with section 3.0.3 of the Code, it shall so notify the Transmitter. Provided that there is available capacity on the applicable connection facility and subject to section J.4.4, the Transmitter shall assign the required capacity to the Customer.

J.4.4. Where the Customer's request for additional capacity on a connection facility under section J.4.3 triggers the implementation of the Transmitter's Board-approved available capacity procedure referred to in section 6.2.11 of the Code, any assignment of available capacity to the Customer shall be determined in accordance with that procedure or, in the absence of such Board-approved procedure, in accordance with section 6.1.8 of the Code.

J.4.5. Subject to section J.4.6, where the Transmitter has assigned capacity on a connection facility to the Customer under section J.4.3 and the Customer has not taken up that additional capacity within one year of the assignment, the Transmitter shall cancel that assignment.

J.4.6. Where the circumstances warrant, the Customer may request an extension of the one-year period referred to in section J.4.5, and the Transmitter shall not unreasonably deny such request. Any dispute arising between the Parties in relation to the extension of such one-year period shall be submitted to the Board for resolution.

J.4.7. Capacity on a connection facility that has been assigned to the Customer shall not be reassigned:

(a) by the Transmitter without the consent of the Customer except in accordance with the Code; or

(b) by the Customer except in connection with a change in ownership of the Customer's facilities.

The Transmitter shall, at the request of the Customer, reassign the Customer's assigned capacity on a connection facility to reflect a change in ownership of the Customer's facilities.

J.4.8. Capacity on a connection facility that has been assigned to the Customer shall not be cancelled by the Transmitter without the consent of the Customer except in accordance with section J.4.5.

J.4.9. The Customer shall provide such information and assistance as the Transmitter may reasonably require in relation to the conduct by the Transmitter of an expansion study under section 6.2.14 of the Code.

J.5. True-ups

J.5.1. The Transmitter shall carry out true-up calculations in accordance with section 6.5 of the Code.

J.5.2. For the purposes of enabling the Transmitter to carry out a true-up calculation referred to in section J.5.1, the Customer shall provide the Transmitter with an updated load forecast. The Parties shall amend Attachment J1 to reflect that updated load forecast.

J.5.3. Where the Customer voluntarily and permanently disconnects any facilities from the Transmitter's facilities prior to the last applicable true-up point determined in accordance with section 6.5.3 of the Code, the transmitter shall at the time of disconnection carry out a final true-up calculation as required by section 6.5.11 of the Code.

J.5.4. Where the Transmitter has carried out a true-up calculation under section J.5.1 or J.5.3:

(a) the Customer shall make a payment to the Transmitter where the results of the true-up calculation so require as set out in section 6.5.6 or 6.5.11 of the Code; or

(b) the Transmitter shall credit or rebate an amount to the Customer where the results of the true-up calculation so require as set out in section 6.5.7 or 6.5.11 of the Code.

Attachment J1

Customer's Load Forecast and Load Shape
(as required by section J.3.1 of Schedule J)

[To be completed by the Parties]

Attachment J2

Customer's Assigned Capacity
(as required by section J.4.1 of Schedule J)

J2.1.1. The Parties shall record the Customer's assigned capacity from time to time as required using the following table or using such other table as the Parties may agree.

Tariff Delivery Point	Supply Voltage (kV)	Tx Connection Point Number	Tx Connection Point	Customer's Assigned Capacity (MW)	Effective Assignment Date	Requested Change in Capacity (MW)	Reservation Dates

SCHEDULE K
CONTACTS FOR PURPOSES OF NOTICE

[To be completed by the Parties]

APPENDIX 1

FORM OF CONNECTION AGREEMENT

(Note: Version A and B of Appendix 1 are published as separate documents)

Appendix 1: Version A- Form of Connection Agreement for Load Customers
Appendix 1: Version B - Form of Connection Agreement for Generator Customers

APPENDIX 2

TRANSMISSION SYSTEM CONNECTION POINT PERFORMANCE STANDARDS

Amended Proposal (June 2, 2005)

APPENDIX 2

TRANSMISSION SYSTEM CONNECTION POINT PERFORMANCE STANDARDS

Ref	Item	Requirement		
1	Voltage variations	Transmission voltages of 500 kV, 230 kV and 115 kV shall be maintained in accordance with the Market Rules. Voltages below 50 kV shall be maintained in accordance with CSA 235		
2	Fault Levels[1]	Nominal Voltage (kV)	Maximum 3-Phase Fault (kA)	Maximum SLG Fault (kA)
		500	80 (usually limited to 63 kA)	80 (usually limited to 63 kA)
		230	63	80 (usually limited to 63 kA)
		115	50	50
	Higher values may exist for short times during switching	44	20	19 (usually limited to 8 kA)
		27.6 (4-wire)	17	12
		27.6 (3-wire)	17	0.45
		13.8	21	10
3	Circuit Breaker Interrupting and Automatic Single Shot Reclose Time	Nominal Voltage (kV)	Rated Interrupting Time (cycles)	Automatic Reclose Time (Seconds)
		500	≤2	10-15
		230	≤3	5-15
		115	≤5	3-6
		< 50	≤8	varies significantly
4	Unbalance	Voltage unbalance is limited to 2% (CAN/CSA E 1000 2-2-97)		
5	Flicker	Voltage flicker shall be limited as tabulated.		
		Magnitude (%)	Limit	
		0.5	3 per second	
		1.0	20 per minute	
		2.0	45 per hour	
		3.0	4 per day	
		A higher flicker may be acceptable for infrequent starts.		
6	Switching Surges	All equipment shall be able to withstand capacitor switching surges that transiently increase voltage to twice normal levels.		
7	Voltage Harmonics	Voltage harmonics shall respect limitations described in Table 11.1 Voltage Distortion Limits IEEE Std 519-1992		
8	Current Harmonics	Current harmonics shall respect limitations described in Tables 10.3 to 10.5 Current Distortion Limits IEEE Std 519-1992.		
9	Telephone Interference	I.T. Product balanced (in phase conductors) shall be less than 5,000 amperes I.T. Product residual (in ground return path) shall be less than 250 amperes		

[1] Maximum fault values referred to in this Appendix are symmetrical fault values.

APPENDIX 3

INFORMATION TO BE MADE AVAILABLE TO CUSTOMERS BY TRANSMITTERS

APPENDIX 3

INFORMATION TO BE MADE AVAILABLE TO CUSTOMERS BY TRANSMITTERS

A customer is only entitled to the following information to the extent that it is available, that it relates specifically to its own existing or proposed connection and that it is relevant to that connection.

1. Nominal supply voltage and insulation-class requirements.
2. Minimum time required before power is made available at the proposed location.
3. Space and other requirements for billing, metering and other equipment, and details regarding any necessary ancillary facilities.
4. Preliminary requirements for conductor spacing and line tension for the interface structure.
5. Long-term voltage variation (to select fixed taps and indicate need to provide for future voltage control).
6. Short-term voltage variation (to select ULTC or regulator range).
7. Temporary overvoltages due to faults or the operation of special protection systems.
8. Voltage dips caused by transmission system faults and the starting of motors, voltage variations caused by capacitor switching, and other transients caused by transmission system operation.
9. Short-circuit infeed from the transmission system: initial, maximum future, minimum normal, and minimum emergency.
10. Transformer connection and grounding requirements.
11. Protective relaying requirements.
12. Transmission system frequency variations at the connection point.
13. Voltage flicker at the connection point.
14. Voltage unbalance at the connection point.
15. Voltage harmonics at the connection point.
16. Operating information:
    - feeder amperes per phase;
    - bus voltage;
    - real and reactive power flow per feeder (where available; otherwise per bus level);
    - feeder breaker open/close status;
    - feeder breaker recloser blocked/not blocked status;
    - bus tie breaker open/close status;
    - capacitor bank breaker open/close status;
    - energy pulse output in kW.h and kVar.h per customer feeder;
    - energy pulse output in kW.h and kVar.h per station bus; and
    - transformer/bus breaker open/close status.

APPENDIX 4

CUSTOMER FINANCIAL RISK CLASSIFICATION

APPENDIX 4

CUSTOMER FINANCIAL RISK CLASSIFICATION

This Appendix sets out the manner in which a transmitter shall determine the risk associated with a proposed new or modified connection of a load customer for the purposes of carrying out an economic evaluation under this Code. In accordance with section 6.6.2(b)(iv) , the manner in which a load customer's risk classification has been determined must be included in the transmitter's economic evaluation documentation.

The risk associated with a proposed new or modified connection of a load customer shall be classified by a transmitter as falling within one of the following risk categories: high risk, medium-high risk, medium-low risk and low risk. The economic evaluation period for the proposed new or modified connection shall be determined based on that risk classification as follows:

Risk Classification	Economic Evaluation Period
High risk	5 years
Medium-high risk	10 years
Medium-low risk	15 years
Low risk	25 years

In accordance with section 6.5.2(a), the transmitter must include its risk classification methodology in its economic evaluation procedure. That methodology must meet the following criteria: transparency, analytic rigour and relative ease of implementation. It must also meet the requirements set out below and, where applicable, be consistent with the recommendations contained in a report to the Board dated March 30, 2000, prepared by PHB Hagler Bailly and entitled "Risk Assessment Methodology Options" (the "Report"). The report is available from the Board's website at www.oeb.gov.on.ca.

The risk classification methodology to be used by the transmitter shall depend on whether the new or modified connection is being financed on a "project finance" basis or is being financed by other means.

New or Modified Connections that are not Project Financed

For a new or modified connection that is not being financed by the load customer on a "project financing" basis, the transmitter must use bond ratings applicable to the customer where these are available. The transmitter will determine the risk classification based on the bond ratings in accordance with the Report.

Where no bond ratings are available for the customer, the transmitter shall use either of the two other methodologies set out in the Report; namely, the Altman Z-score Model or the Kaplan-Urwitz Model, if the necessary information is available to the transmitter. The transmitter's methodology must indicate the circumstances in which it may choose to use one Model rather than the other. The transmitter will determine the risk classification based on the customer's Altman Z-score or Kaplan-Urtwiz score in accordance with the Report. The transmitter shall ensure that it uses the most recent version of the Model in question, and shall include the most recent version of the Model in its economic evaluation procedure referred to in section 6.5.2. A revision to the transmitter's economic evaluation procedure to update a Model shall not

constitute a material amendment to the transmitter's connection procedures for the purposes of section 6.1.5 and therefore does not require the approval of the Board.

Where the transmitter considers that the risk classification that results from the application of the bond rating or Altman Z-score/Kaplan-Urtwiz score methodology produces an anomalous result, the transmitter may with the consent of the customer assign a different risk classification to the new or proposed connection. Where the customer does not consent, the transmitter may apply to the Board for approval to determine the customer's risk classification using an alternate methodology.

Where a load customer has not provided the transmitter with some or all of the information necessary to determine the customer's Altman Z-score or Kaplan-Urwitz score, as applicable, the transmitter may use estimates based on comparable information provided by other similarly-situated customers. Where no such comparable information is available or where the transmitter considers that the customer's circumstances are such as to render comparisons with similarly-situated customers inappropriate, the transmitter may classify the risk associated with the proposed new or modified connection as high risk.

<u>New or Modified Connections that are Project Financed</u>

The transmitter shall outline in the risk classification methodology that forms part of its economic evaluation procedure the general approach or guiding principles that the transmitter will use in determining the risk classification for new or modified connections that are being financed by the customer on a "project financing" basis. The transmitter shall determine the risk classification for such new or modified connections based on that general approach or guiding principles, using information that the transmitter considers reasonable in the circumstances. The transmitter shall disclose to the customer in question the methodology and information used to determine the risk classification in such cases.

APPENDIX 5

METHODOLOGY AND ASSUMPTIONS FOR ECONOMIC EVALUATIONS

APPENDIX 5

METHODOLOGY AND ASSUMPTIONS FOR ECONOMIC EVALUATIONS

A transmitter shall use the methodology set out in this Appendix to conduct any economic evaluation under this Code. This methodology consists of a discounted cash flow (DCF) calculation for the connection of load customer's new or modified facilities using the methodology set out below. As required by section 6.5.2, separate economic evaluations must be conducted for transformation connection facilities and line connection facilities.

Net Present Value ("NPV")		=	Present Value ("PV") of Operating Cash Flow + PV of Capital Cost Allowance ("CCA") Tax Shield - PV of Capital, calculated over the economic evaluation period.
1.	PV of Operating Cash Flow	=	PV of Net Operating Cash (before taxes) - PV of Taxes
	a) PV of Net Operating Cash	=	PV of (Annual Connection Revenue - Annual Connection Operating Maintenance & Administration ("OM&A") Costs).
	Annual Connection Revenue	=	The relevant annual connection rates revenue derived from that part of the customer's new load that exceeds the total normal operating capacity of any connection facility already serving that customer and which will be served by a new connection facility or modification
	Annual Connection OM&A Costs	=	The relevant annual administrative costs associated with supply of the customer plus the relevant annual operating and maintenance costs associated with new or modified connection facilities of the transmitter.
	b)PV of Taxes	=	PV of Municipal Taxes + PV of Capital Taxes + PV of Income Taxes (before Interest tax shield)
	Annual Municipal Taxes	=	(Municipal Tax Rate)* (Assessed Value of Relevant Property)
	Annual Capital Taxes	=	(Capital Tax Rate) * (Relevant Closing Undepreciated Capital Cost Balance)
	Relevant Closing Undepreciated Capital Cost Balance	=	That portion of the transmitter's Closing Undepreciated Capital Cost Balance attributed to the new or enhanced connection assets associated with the specific connection.
	Annual Income Taxes	=	(Income Tax Rate) * (Net Annual Operating Cash - Annual Municipal Taxes - Annual Capital Taxes)
	Net Annual Operating Cash	=	(Annual Connection Revenue - Annual Connection OM&A)
2.	PV of CCA Tax Shield	=	[(Income Tax Rate) * (CCA Rate) * (Total Annual Capital Expenditure)] / [CCA Rate + Discount Rate]
	CCA Rate	=	Capital Cost Allowance Rate
	Total Annual Capital Expenditure	=	Sum of the total relevant Annual Capital Expenditures of the transmitter.

3.	PV of Capital	=	PV of Annual Capital Expenditures
	Annual Capital Expenditures	=	The relevant annual capital expenditures of the transmitter based on fully allocated costing principles including capital for new connection facilities and/or modified connection facilities to accommodate the proposed new or upgraded customer connection and any transfer price paid to a customer for any facilities built under an alternative bid option and transferred to the transmitter.

Notes:

The Capital Tax Rate is a combination of the Federal Large Corporation Tax Rate and the Provincial Capital Tax Rate.

The Income Tax Rate is a combination of the Federal Income Tax Rate and the Provincial Income Tax Rate.

Land is not eligible for CCA.

The PV of CCA Tax Shield can also be calculated annually and present valued in the PV of Taxes calculation. An adjustment is needed to account for the ½ year CCA rule.

For purposes of the calculations above, a transmitter shall ensure that the most up-to-date current and known future federal and provincial tax rates are being used.

Assumptions

1. The economic evaluation period shall be determined as follows based on the risk classification of the proposed new or modified connection as determined by the transmitter in accordance with Appendix 4:

Risk Classification	Economic Evaluation Period
High Risk	5 years
Medium-High Risk	10 years
Medium-Low Risk	15 years
Low Risk	25 years

2. The discount rate to be used in the DCF calculation shall be based on the transmitter's current deemed debt-to-equity ratio, debt and preference share costs and Board-approved rate of return on equity. Up-front capital expenditures will be discounted at the beginning of the project year and capital expended throughout the year will be mid-year discounted. The same approach to discounting will be used for revenues and OM&A expenditures.

3. Capital costs shall be based on the minimum standard design required to supply the forecasted customer load except where the new or modified facility was previously planned by the transmitter, in which case the capital costs shall be limited to the cost of advancement as required by section 6.5.2.