



ONTARIO ENERGY BOARD

Distribution System Code

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Table of Contents

1	GENERAL AND ADMINISTRATIVE PROVISIONS	-1-
1.1	The Purpose of this Code	-1-
1.2	Definitions	-1-
1.3	Interpretations	-9-
1.4	To Whom this Code Applies	-9-
1.5	Hierarchy of Codes	-9-
1.6	Amendments to this Code	-10-
1.7	Coming into Force	-10-
1.8	Requirements for Board Approvals	-11-
2	STANDARDS OF BUSINESS PRACTICE AND CONDUCT	-11-
2.1	Connection Agreement Requirement	-11-
2.2	Liability	-11-
2.3	Force Majeure	-11-
2.4	Conditions of Service	-12-
3	CONNECTIONS AND EXPANSIONS	-21-
3.1	Connections	-21-
3.2	Expansions	-23-
3.3	Alternative Bids	-26-
3.4	Enhancements	-28-
3.5	Relocation of Plant	-28-
4	OPERATIONS	-29-
4.1	Quality of Supply	-29-
4.2	Disconnection and Reconnection	-30-
4.3	Unauthorized Energy Use	-31-
4.4	System Inspection Requirements and Maintenance	-32-
4.5	Unplanned Outages and Emergency Conditions	-33-
4.6	Health and Safety	-34-
5	METERING	-35-
5.1	Provision of Meters and Metering Services	-35-
5.2	Metering Requirements for Generating Facilities	-37-

5.3	VEE Process	-38-
6	DISTRIBUTORS' RESPONSIBILITIES	-40-
6.1	Responsibilities to Load Customers	-40-
6.2	Responsibilities to Generators	-41-
6.3	Responsibilities to Other Distributors	-49-
6.4	Sharing Arrangements Between Distributors	-50-
6.5	Load Transfers	-51-
6.6	Provision of Information	-53-

APPENDICES

APPENDIX A - Conditions of Service

APPENDIX B - Methodology and Assumptions for an Economic Evaluation

APPENDIX C - Minimum Inspection Requirements

APPENDIX D - Information in a Connection Agreement with a Customer

APPENDIX E - Contracts and Applications for Connecting a Generator to the
Local Distribution System

APPENDIX F - Process and Technical Requirements for Connecting Embedded
Generation Facilities

APPENDIX G - Process for Connecting Another Distributor

Distribution System Code

1 GENERAL AND ADMINISTRATIVE PROVISIONS

1.1 The Purpose of this Code

This Code sets the minimum conditions that a distributor must meet in carrying out its obligations to distribute electricity under its licence and the *Energy Competition Act, 1998*. Unless otherwise stated in the licence or Code, these conditions apply to all transactions and interactions between a distributor and all retailers, generators, distributors, transmitters and consumers of electricity who use the distributor's distribution system.

1.2 Definitions

In this Code:

“Accounting Procedures Handbook” means the handbook approved by the Board and in effect at the relevant time, which specifies the accounting records, accounting principles and accounting separation standards to be followed by the distributor;

“Act” means the Ontario Energy Board Act, 1998, S.O. 1998, C. 15, Schedule B;

“Affiliate Relationships Code” means the code, approved by the Board and in effect at the relevant time, which among other things, establishes the standards and conditions for the interaction between electricity distributors or transmitters and their respective affiliated companies;

“ancillary services” means services necessary to maintain the reliability of the IMO-controlled grid; including frequency control, voltage control, reactive power and operating reserve services;

“bandwidth” means a distributor's defined tolerance used to flag data for further scrutiny at the stage in the VEE process where a current reading is compared to a reading from an equivalent

Distribution System Code

historical billing period. For example, a 30 percent bandwidth means a current reading that is either 30 percent lower or 30 percent higher than the measurement from an equivalent historical billing period will be identified by the VEE process as requiring further scrutiny and verification;

“Board” means the Ontario Energy Board;

“Code” means the Distribution System Code;

"competitive retailer" is a person who retails electricity to consumers who do not take Standard Supply Service ("SSS");

“complex metering installation” means a metering installation where instrument transformers, test blocks, recorders, pulse duplicators and multiple meters may be employed;

“Conditions of Service” means the document developed by a distributor in accordance with subsection 2.3 of this Code that describes the operating practices and connection rules for the distributor;

“connection” means the process of installing and activating connection assets in order to distribute electricity;

“Connection Agreement” means an agreement entered into between a distributor and a person connected to its distribution system that delineates the conditions of the connection and delivery of electricity to or from that connection;

“connection assets” means that portion of the distribution system used to connect a customer to the existing main distribution system, and consists of the assets between the point of connection on a distributor’s main distribution system and the ownership demarcation point with that customer;

“consumer” means a person who uses, for the person’s own consumption, electricity that the person did not generate;

“customer” means a person that has contracted for or intends to contract for connection of a building or an embedded generation facility. This includes developers of residential or commercial sub-divisions;

“demand meter” means a meter that measures a consumer’s peak usage during a specified period of time;

Distribution System Code

“disconnection” means a deactivation of connection assets that results in cessation of distribution services to a consumer;

"disconnect/collect trip" is a visit to a customer's premises by an employee or agent of the distributor to demand payment of an outstanding amount or to shut off or limit distribution of electricity to the customer failing payment.

“distribute”, with respect to electricity, means to convey electricity at voltages of 50 kilovolts or less;

“distribution losses” means energy losses that result from the interaction of intrinsic characteristics of the distribution network such as electrical resistance with network voltages and current flows;

“distribution loss factor” has the meaning described to it in the Retail Settlement Code;

“distribution services” means services related to the distribution of electricity and the services the Board has required distributors to carry out;

“distribution system” means a system for distributing electricity, and includes any structures, equipment or other things used for that purpose. A distribution system is comprised of the main system capable of distributing electricity to many customers and the connection assets used to connect a customer to the main distribution system;

“Distribution System Code” means the code, approved by the Board, and in effect at the relevant time, which, among other things, establishes the obligations of a distributor with respect to the services and terms of service to be offered to customers and retailers and provides minimum technical operating standards of distribution systems;

“distributor” means a person who owns or operates a distribution system;

“*Electricity Act*” means the *Electricity Act, 1998*, S.O. 1998, c.15, Schedule A;

“*Energy Competition Act*” means the *Energy Competition Act, 1998*, S.O. 1998, c. 15;

“Electrical Safety Authority” or “ESA” means the person or body designated under the *Electricity Act* regulations as the Electrical Safety Authority;

Distribution System Code

“embedded distributor” means a distributor who is not a wholesale market participant and that is provided electricity by a host distributor;

“embedded generation facility” means a generation facility which is not directly connected to the IMO-controlled grid but instead is connected to a distribution system;

“embedded load displacement generation facility” means an embedded generation facility connected to the customer side of the revenue meter where the generation facility does not inject electricity into the distribution system for the purpose of sale;

“embedded wholesale consumer” means a consumer who is a wholesale market participant whose facility is not directly connected to the IMO-controlled grid but is connected to a distribution system;

“emergency” means any abnormal system condition that requires remedial action to prevent or limit loss of a distribution system or supply of electricity that could adversely affect the reliability of the electricity system;

“emergency backup generation facility” means a generation facility that has a transfer switch that isolates it from a distribution system;

“enhancement” means a modification to an existing distribution system that is made for purposes of improving system operating characteristics such as reliability or power quality or for relieving system capacity constraints resulting, for example, from general load growth;

“expansion” means an addition to a distribution system in response to a request for additional customer connections that otherwise could not be made; for example, by increasing the length of the distribution system;

“four-quadrant interval meter” means an interval meter that records power injected into a distribution system and the amount of electricity consumed by the customer;

“generate”, with respect to electricity, means to produce electricity or provide ancillary services, other than ancillary services provided by a transmitter or distributor through the operation of a transmission or distribution system;

“generation facility” means a facility for generating electricity or providing ancillary services, other than ancillary services provided by a transmitter or distributor through the operation of

Distribution System Code

a transmission or distribution system, and includes any structures, equipment or other things used for that purpose;

“generator” means a person who owns or operates a generation facility;

“geographic distributor,” with respect to a load transfer, means the distributor that is licensed to service a load transfer customer and is responsible for connecting and billing the load transfer customer;

“good utility practice” means any of the practices, methods and acts engaged in or approved by a significant portion of the electric utility industry in North America during the relevant time period, or any of the practices, methods and acts which, in the exercise of reasonable judgement 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 practices, reliability, safety and expedition. Good utility practice is not intended to be limited to the optimum practice, method, or act to the exclusion of all others, but rather to be acceptable practices, methods, or acts generally accepted in North America;

“holiday” means a Saturday, Sunday, statutory holiday, or any day as defined in the Province of Ontario as a legal holiday;

“host distributor” means the distributor who provides electricity to an embedded distributor;

“IMO” means the Independent Electricity Market Operator established under the Electricity Act;

“IMO-Controlled Grid” means the transmission systems with respect to which, pursuant to agreements, the IMO has authority to direct operation;

“interval meter” means a meter that measures and records electricity use on an hourly or sub-hourly basis;

“large embedded generation facility” means an embedded generation facility with a name-plate rated capacity of 10 MW or more;

“load transfer” means a network supply point of one distributor that is supplied through the distribution network of another distributor and where this supply point is not considered a wholesale supply or bulk sale point;

Distribution System Code

“load transfer customer” means a customer that is provided distribution services through a load transfer;

“Market Rules” means the rules made under section 32 of the *Electricity Act*;

“Measurement Canada” means the Special Operating Agency established in August 1996 by the *Electricity and Gas Inspection Act*, 1980-81-82-83, c. 87., and Electricity and Gas Inspection Regulations (SOR/86-131);

“meter service provider” means any entity that performs metering services on behalf of a distributor or generator;

“meter installation” means the meter and, if so equipped, the instrument transformers, wiring, test links, fuses, lamps, loss of potential alarms, meters, data recorders, telecommunication equipment and spin-off data facilities installed to measure power past a meter point, provide remote access to the metered data and monitor the condition of the installed equipment;

“metering services” means installation, testing, reading and maintenance of meters;

“micro-embedded load displacement generation facility” means an embedded load displacement generation facility with a name-plate rated capacity of 10 kW or less;

“mid-sized embedded generation facility” means an embedded generation facility with a name-plate rated capacity of less than 10 MW and:

- (a) more than 500 kW in the case of a facility connected to a less than 15 kV line; and
- (b) more than 1 MW in the case of a facility connected to a 15 kV or greater line;

“MIST meter” means an interval meter from which data is obtained and validated within a designated settlement timeframe. MIST refers to “Metering Inside the Settlement Timeframe;”

“MOST meter” means an interval meter from which data is only available outside of the designated settlement timeframe. MOST refers to “Metering Outside the Settlement Timeframe;”

Distribution System Code

“Ontario Electrical Safety Code” means the code adopted by O. Reg. 164/99 as the Electrical Safety Code;

“*Ontario Energy Board Act*” means the *Ontario Energy Board Act, 1998*, S.O. 1998, c.15, Schedule B;

“operational demarcation point” means the physical location at which a distributor’s responsibility for operational control of distribution equipment including connection assets ends at the customer;

“ownership demarcation point” means the physical location at which a distributor’s ownership of distribution equipment including connection assets ends at the customer;

“performance standards” means the performance targets for the distribution and connection activities of the distributor as established by the Board pursuant to the Act and in the Rate Handbook;

“physical distributor,” with respect to a load transfer, means the distributor that provides physical delivery of electricity to a load transfer customer, but is not responsible for connecting and billing the load transfer customer directly;

“point of supply,” with respect to an embedded generation facility, means the connection point where electricity produced by the generation facility is injected into the distribution system;

“rate” means any rate, charge or other consideration, and includes a penalty for late payment;

“Rate Handbook” means the document approved by the Board that outlines the regulatory mechanisms that will be applied in the setting of distributor rates;

“Regulations” means the regulations made under the *Act or the Electricity Act* ;

“retail”, with respect to electricity means,

- a) to sell or offer to sell electricity to a consumer
- b) to act as agent or broker for a retailer with respect to the sale or offering for sale of electricity, or

Distribution System Code

- c) to act or offer to act as an agent or broker for a consumer with respect to the sale or offering for sale of electricity.

“Retail Settlement Code” means the code approved by the Board and in effect at the relevant time, which, among other things, establishes a distributor’s obligations and responsibilities associated with financial settlement among retailers and customers and provides for tracking and facilitating customer transfers among competitive retailers;

“retailer” means a person who retails electricity;

“service area,” with respect to a distributor, means the area in which the distributor is authorized by its license to distribute electricity;

“small embedded generation facility” means an embedded generation facility which is not a micro-embedded generation facility with a name-plate rated capacity of 500 kW or less in the case of a facility connected to a less than 15 kV line and 1MW or less in the case of a facility connected to a 15 kV or greater line;

“total losses” means the sum of distribution losses and unaccounted for energy;

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

“Transmission System Code” means the code, approved by the Board, that is in force at the relevant time, which regulates the financial and information obligations of the Transmitter with respect to its relationship with customers, as well as establishing the standards for connection of customers to, and expansion of a transmission system;

“transmit”, with respect to electricity, means to convey electricity at voltages of more than 50 kilovolts;

“transmitter” means a person who owns or operates a transmission system;

“unaccounted for energy” means all energy losses that cannot be attributed to distribution losses. These include measurement error, errors in estimates of distribution losses and unmetered loads, energy theft and non-attributable billing errors;

Distribution System Code

“unmetered loads” means electricity consumption that is not metered and is billed based on estimated usage;

“validating, estimating and editing (VEE)” means the process used to validate, estimate and edit raw metering data to produce final metering data or to replicate missing metering data for settlement purposes;

“wholesale buyer” means a person that purchases electricity or ancillary services in the IMO-administered markets or directly from a generator;

“wholesale market participant”, means a person that sells or purchases electricity or ancillary services through the IMO-administered markets;

“wholesale supplier” means a person who sells electricity or ancillary services through the IMO-administered markets or directly to another person, other than a consumer.

1.3 Interpretations

Unless otherwise defined in this Code, words and phrases shall have the meaning ascribed to them in the *Act*, or the *Electricity Act*, as the case may be. Headings are for convenience only and shall not affect the interpretation of this Code. Words importing the singular include the plural and vice versa. A reference to a document or a provision of a document includes any amendment or supplement to, or any replacement of, that document or that provision of that document. An event that is required under this Code to occur on or by a stipulated day which is a holiday may occur on or by the next day, that is not holiday.

1.4 To Whom this Code Applies

This Code applies to all electricity distributors licensed by the Ontario Energy Board under Part V of the *Ontario Energy Board Act, 1998*. These entities are obligated to comply with the Code as a condition of their licence.

1.5 Hierarchy of Codes

The order of hierarchy for the Distribution System Code in relation to other codes, subject to any specific conditions of a licence that apply to the distributor, are as follows:

Distribution System Code

1. Affiliate Relationships Code
2. Distribution System Code
3. Retail Settlement Code
4. Standard Supply Service Code

1.6 Amendments to this Code

This Code may be amended only in accordance with the procedures set out by the Board in the licence issued to a distributor.

1.7 Coming into Force

This Code comes into force on the day subsection 26(1) of the *Electricity Act* comes into force with the following exception.

Any amendments to this Code shall come into force on the date the Board publishes the amendments by placing them on the Board's website after they have been made by the Board, except where expressly provided otherwise.

All of Chapter 3, *Connections and Expansions* and Subsection 6.2.3 of Section 6.2, *Responsibilities to Generators* come into force on September 29, 2000. These provisions do not apply to projects that are the subject of an agreement entered into before November 1, 2000.

The amendments to this Code made by the Board on December 19, 2003 come into effect on March 22, 2004. [Note: Primarily section 6.2. Appendix E and F were also replaced].

Sections 2.4.6.1, 2.4.6.2 and 2.4.9 to 2.4.28 come into force on the day that is 6 months after these sections are published on the Board's website after having been made by the Board. [Note: These sections were published on February 3, 2004].

1.8 Requirements for Board Approvals

Distribution System Code

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

2 STANDARDS OF BUSINESS PRACTICE AND CONDUCT

2.1 Connection Agreement Requirement

Note: Section 2.1 revoked by amendment, effective March 22, 2004.

2.2 Liability

2.2.1 A distributor shall only be liable to a customer and a customer shall only be liable to a distributor for any damages which arise directly out of the willful misconduct or negligence:

- Of the distributor in providing distribution services to the customer;
- Of the customer in being connected to the distributor's distribution system; or
- Of the distributor or customer in meeting their respective obligations under this Code, their licences and any other applicable law.

2.2.2 Despite section 2.2.1; neither the distributor nor the customer shall be liable under any circumstances whatsoever 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 but not limited to punitive or exemplary damages, whether any of the said liability, loss or damages arise in contract, tort or otherwise.

2.3 Force Majeure

2.3.1 Neither party shall be held to have committed an event of default in respect of any obligation under this Code if prevented from performing that obligation, in whole or in part, because of a force majeure event.

Distribution System Code

2.3.2 If a force majeure event prevents a party from performing any of its obligations under this Code and the applicable Connection Agreement, that party shall:

- Promptly notify the other party of the force majeure event and its assessment in good faith of the effect that the event will have on its ability to perform any of its obligations. If the immediate notice is not in writing, it shall be confirmed in writing as soon as reasonably practicable.
- Not be entitled to suspend performance of any of its obligations under this Code to any greater extent or for any longer time than the force majeure event requires it to do;
- Use its best efforts to mitigate the effects of the force majeure event, remedy its inability to perform, and resume full performance of its obligations;
- Keep the other party continually informed of its efforts; and
- Provide written notice to the other party when it resumes performance of any obligations affected by the force majeure event.

2.3.3 Notwithstanding any of the foregoing, settlement of any strike, lockout, or labor dispute constituting a force majeure event shall be within the sole discretion of the party to the agreement involved in the strike, lockout, or labour dispute. The requirement that a party must use its best efforts to remedy the cause of the force majeure event, mitigate its effects, and resume full performance under this Code shall not apply to strikes, lockouts, or labour disputes

2.4 Conditions of Service

2.4.1 A distributor shall document its Conditions of Service that describe the operating practices and connection policies of the distributor. All distributors shall have a Conditions of Service. Subject to this Code and other applicable laws, a distributor shall comply with its Conditions of Service but may waive a provision of its Conditions of Service in favour of a customer or potential customer.

Distribution System Code

2.4.2 A distributor shall file a copy of its Conditions of Service with the Board, make its Conditions of Service publicly available and provide a copy to any person requesting it. A distributor shall provide one copy per revision for each person that requests it.

2.4.3 A distributor's existing Conditions of Service will be deemed to meet the standards set out in this Code for a period of one year following the coming into force of this Code, after which point the distributor must comply.

2.4.4

Note: Section 2.4.4 revoked by amendment, effective March 22, 2004.

2.4.5 A distributor's Conditions of Service may be subject to review as part of the distributor's performance based rates plan.

2.4.6 A distributor's Conditions of Service shall include, at a minimum, a description of the following:

- Ⓒ The types of connection service performed by the distributor for each customer class, and the conditions under which these connections will be performed (connection policy).
- Ⓒ The distributor's basic connection service that is recovered through its revenue requirements and does not require a variable connection charge.
- Ⓒ The distributor's capital contribution policy by customer class for an offer to connect, including procedures for collection of capital contributions.
- Ⓒ The demarcation point at which the distributor's operational responsibilities for distribution equipment end at the customer.
- Ⓒ The demarcation point at which the distributor's ownership of distribution equipment ends at the customer.
- Ⓒ The billing cycle period and payment requirements by customer class.

Distribution System Code

- C Design requirements for connection to the distribution system.
- C Voltages at which the distributor provides electricity and corresponding load thresholds.
- C Type of meters provided by the distributor.
- C Meters required by customer class.
- C Quality of Service standards to which the distribution system is designed and operated.
- C Conditions under which supply may be unreliable or intermittent.
- C Conditions under which service may be interrupted.
- C Conditions under which the distributor may disconnect a consumer.
- C Policies for planned interruptions.
- C The business process the distributor uses to disconnect and reconnect consumers, including means of notification and timing.
- C The distributor's rights and obligations with respect to a customer.
- C Rights and obligations a consumer or embedded generator has with respect to the distributor.
- C The distributor's liability limitations in accordance with this Code.
- C The distributor's dispute resolution procedure.
- C Terms and conditions under which the distributor provides other services in its capacity as a distributor.

The conditions of service must be consistent with the provisions of this Code and all other applicable codes and legislation including the Rate Handbook.

2.4.6.1 A distributor's Conditions of Service shall include the distributor's security deposit policy which shall be consistent with the provisions of this Code. A distributor's security deposit policy shall include at a minimum the following:

- C a list of all potential types/forms of security accepted;
- C a detailed description of how the amount of security is calculated;

Distribution System Code

- C limits on amount of security required;
- C the planned frequency, process and timing for updating security;
- C a description of how interest payable to customers on deposits is determined;
- C criteria customers must meet to have security deposit waived and/or returned;
and
- C methods of enforcement where a security deposit is not paid.

2.4.6.2 Subject to this Code and a distributor's Conditions of Service, a distributor may use any risk mitigation options available under law to manage customer non-payment risk. A distributor shall not discriminate among customers with similar risk profiles or risk related factors except where expressly permitted under this Code.

2.4.7 If a distributor's Conditions of Service are documented in a form or in an order different than that specified in the generic Conditions of Service attached to this Code as Appendix A, the distributor shall provide a mapping of terms in its Conditions of Service to the sections and subsections in Appendix A.

2.4.8 A distributor shall provide advance public notice of any changes to its Conditions of Service. Notice shall be, at a minimum, provided to each customer by means of a note on and/or included with the customer's bill. The public notice shall include a proposed timeline for implementation of the new Conditions of Service and a means by which public comment may be provided. A distributor shall provide the Board with a copy of the new Conditions of Service once they are implemented. The copy of the revised document shall include a cover letter that outlines the changes from the prior document, as well as a summary of any public comments on the changes.

2.4.9 A distributor may require a security deposit from a customer who is not billed by a competitive retailer under retailer-consolidated billing unless the customer has a good payment history of 1 year in the case of a residential customer, 5 years in the case of

Distribution System Code

a non-residential customer in a <50 kW demand rate class or 7 years in the case of a non-residential customer in any other rate class. The time period that makes up the good payment history must be the most recent period of time and some of the time period must have occurred in the previous 24 months. A distributor shall provide a customer with the specific reasons for requiring a security deposit from the customer.

- 2.4.10 For the purposes of section 2.4.9, a customer is deemed to have a good payment history unless, during the relevant time period set out in section 2.4.9, the customer has received more than one disconnection notice from the distributor, more than one cheque given to the distributor by the customer has been returned for insufficient funds, more than one pre-authorized payment to the distributor has been returned for insufficient funds or a disconnect / collect trip has occurred. If any of the preceding events occur due to an error by the distributor, the customer's good payment history shall not be affected.
- 2.4.11 Despite section 2.4.9, a distributor shall not require a security deposit where:
- (a) a customer provides a letter from another distributor or gas distributor in Canada confirming a good payment history with that distributor for the most recent relevant time period set out in section 2.4.9 where some of the time period which makes up the good payment history has occurred in the previous 24 months; or
 - (b) a customer, other than a customer in a >5000 kW demand rate class, provides a satisfactory credit check made at the customer's expense.
- 2.4.12 The maximum amount of a security deposit which a distributor may require a customer to pay shall be calculated in the following manner:

Distribution System Code

billing cycle factor x estimated bill based on the customer's average monthly load with the distributor during the most recent 12 consecutive months within the past two years

Where relevant usage information is not available for the customer for 12 consecutive months within the past two years or where the distributor does not have systems capable of making the above calculation, the customer's average monthly load shall be based on a reasonable estimate made by the distributor.

- 2.4.13 Despite section 2.4.12, where a non-residential customer in any rate class other than a < 50 kW demand rate class has a credit rating from a recognized credit rating agency, the maximum amount of a security deposit which the distributor may require the non-residential customer to pay shall be reduced in accordance with the following table:

Credit Rating <i>(Using Standard and Poor's Rating Terminology)</i>	Allowable Reduction in Security Deposit
AAA- and above or equivalent	100%
AA-, AA, AA+ or equivalent	95%
A-, From A, A+ to below AA or equivalent	85%
BBB-, From BBB, BBB+ to below A or equivalent	75%
Below BBB- or equivalent	0%

- 2.4.14 For the purposes of calculating the estimated bill under section 2.4.12 for a low-volume consumer or designated consumer who is billed under SSS or distributor-consolidated billing, the price estimate used in calculating competitive electricity costs shall be the same as the price used by the IMO for the purpose of determining maximum net exposures and prudential support obligations for distributors, low-volume consumers

Distribution System Code

and designated consumers. For the purpose of calculating the estimated bill under section 2.4.12 for all other customers billed under SSS or distributor-consolidated billing, the price estimate used in calculating competitive electricity costs shall be the same as the price used by the IMO for the purpose of determining maximum net exposures and prudential support obligations for market participants other than distributors, low-volume consumers and designated consumers.

- 2.4.15 Subject to section 2.4.6.2, a distributor may in its discretion reduce the amount of a security deposit which it requires a customer to pay for any reason including where the customer pays under an interim payment arrangement and where the customer makes pre-authorized payments.
- 2.4.16 For the purposes of sections 2.4.12, the billing cycle factor is 2.5 if the customer is billed monthly, 1.75 if the customer is billed bi-monthly and 1.5 if the customer is billed quarterly.
- 2.4.17 Where a customer has a payment history which discloses more than one disconnection notice in a relevant 12 month period, the distributor may use that customer's highest actual or estimated monthly load for the most recent 12 consecutive months within the past 2 years for the purposes of making the calculation of the maximum amount of security deposit under section 2.4.12.
- 2.4.18 The form of payment of a security deposit for a residential customer shall be cash or cheque at the discretion of the customer or such other form as is acceptable to the distributor.
- 2.4.19 The form of payment of a security deposit for a non-residential customer shall be cash, cheque or an automatically renewing, irrevocable letter of credit from a bank as defined in the *Bank Act*, 1991, c.46 at the discretion of the customer. The distributor

Distribution System Code

may also accept other forms of security such as surety bonds and third party guarantees.

- 2.4.20 A distributor shall permit the customer to provide a security deposit in equal installments paid over at least four months. A customer may, in its discretion, choose to pay the security deposit over a shorter time period.
- 2.4.21 Interest shall accrue monthly on security deposits made by way of cash or cheque commencing on receipt of the total deposit required by the distributor. The interest rate shall be at the Prime Business Rate as published on the Bank of Canada website less 2 percent, updated quarterly. The interest accrued shall be paid out at least once every 12 months or on return or application of the security deposit or closure of the account, whichever comes first, and may be paid by crediting the account of the customer or otherwise.
- 2.4.22 A distributor shall review every customer's security deposit at least once in a calendar year to determine whether the entire amount of the security deposit is to be returned to the customer as the customer is now in a position that it would be exempt from paying a security deposit under section 2.4.9 or 2.4.11 had it not already paid a security deposit or whether the amount of the security deposit is to be adjusted based on a re-calculation of the maximum amount of the security deposit under section 2.4.12 or 2.4.13.
- 2.4.23 A customer may, no earlier than 12 months after the payment of a security deposit or the making of a prior demand for a review, demand in writing that a distributor undertake a review to determine whether the entire amount of the security deposit is to be returned to the customer as the customer is now in a position that it would be exempt from paying a security deposit under section 2.4.9 or 2.4.11 had it not already paid a security deposit or whether the amount of the security deposit is to be adjusted

Distribution System Code

based on a re-calculation of the maximum amount of the security deposit under section 2.4.12 or 2.4.13.

- 2.4.24 Despite section 2.4.22, a distributor is not required to review a security deposit paid prior to February 2, 2004 during the calendar year 2004. Despite section 2.4.23, a customer may not demand a review of a security deposit paid prior to February 2, 2004 until February 1, 2005.
- 2.4.25 Where the distributor determines in conducting a review under section 2.4.22 or 2.4.23 that some or all of the security deposit is to be returned to the customer, the distributor shall promptly return this amount to the customer by crediting the customer's account or otherwise. Despite sections 2.4.22 and 2.4.23, in the case of a customer in a > 5000 kW demand rate class, where the customer is now in a position that it would be exempt from paying a security deposit under section 2.4.9 or 2.4.11 had it not already paid a security deposit, the distributor is only required to return 50% of the security deposit held by the distributor. Despite section 2.4.20, where the distributor determines in conducting a review under section 2.4.22 or 2.4.23 that the maximum amount of the security deposit is to be adjusted upward, the distributor may require the customer to pay this additional amount at the same time as that customer's next regular bill comes due.
- 2.4.26 A distributor shall promptly return any security deposit received from the customer upon closure of the customer's account, subject to the distributor's right to use the security deposit to set off other amounts owing by the customer to the distributor. The security deposit shall be returned within six weeks of the closure of an account.
- 2.4.27 A distributor shall apply a security deposit to the final bill prior to the change in service where a customer changes from SSS to a competitive retailer that uses retailer-consolidated billing or a customer changes billing options from distributor-consolidated billing to split billing or retailer-consolidated billing. A distributor shall

Distribution System Code

promptly return any remaining amount of the security deposit to the customer. A distributor shall not pay any portion of a customer's security deposit to a competitive retailer. Where a change is made from distributor-consolidated billing to split billing, a distributor may retain a portion of the security deposit amount that reflects the non-payment risk associated with the new billing option.

2.4.28 For the purposes of sections 2.4.9 and 2.4.18, the following customers shall be deemed to be residential customers:

- (a) seasonal customers who are not classified as general service customers;
and
- (b) customers of a distributor with a farm rate class who have farms with a dwelling that is occupied as a residence continuously for at least 8 months of the year, where the customer has a < 50 kW demand.

3 CONNECTIONS AND EXPANSIONS

3.1 Connections

3.1.1 In establishing its connection policy as specified in its Conditions of Service, and determining how to comply with its obligations under section 28 of the Electricity Act, a distributor may consider the following reasons to refuse to connect, or continue to connect, a customer:

- C Contravention of the laws of Canada or the Province of Ontario including the Ontario Electrical Safety Code.
- C Violation of conditions in a distributor's licence.
- C Materially adverse effect on the reliability or safety of the distribution system.

Distribution System Code

- C Imposition of an unsafe worker situation beyond normal risks inherent in the operation of the distribution system.
 - C A material decrease in the efficiency of the distributor's distribution system.
 - C A materially adverse effect on the quality of distribution services received by an existing connection.
 - C If the person requesting the connection owes the distributor money for distribution services.
 - C Violation of any other conditions identified in the distributor's Conditions of Service document.
- 3.1.2 A distributor shall ensure that all electrical connections to its system meet the distributor's design requirements, unless the electrical connections are separated by a protection device that has been approved by the distributor. If an electrical connection does not meet the distributor's design requirements, a distributor may refuse connection.
- 3.1.3 If a distributor refuses to connect a customer, the distributor shall inform the person requesting the connection of the reason(s) for not connecting and, where the distributor is able to provide a remedy, make an offer to connect. If the distributor is unable to provide a remedy to resolve the issue, it is the responsibility of the customer to do so before a connection may be made.
- 3.1.4 For residential customers, a distributor shall define a basic connection and recover the cost of the basic connection as part of its revenue requirement. The basic connection for each customer shall include, at a minimum, 1) supply and installation of overhead distribution transformation capacity or an equivalent credit for transformation equipment; and 2) up to 30 meters of overhead conductor or an equivalent credit for underground services.

Distribution System Code

3.1.5 For non-residential customers, a distributor may define a basic connection by rate class and recover the cost of connection either as part of its revenue requirement, or through a basic connection charge to the customer.

3.1.6 All customer classes shall be subject to a variable connection charge to be calculated as the costs associated with the installation of connection assets above and beyond the basic connection. A distributor may recover this amount from a customer through a connection charge or equivalent payment.

3.2 Expansions

3.2.1 If a distributor must construct new facilities to its main distribution system or increase the capacity of existing distribution system facilities in order to be able to connect a specific customer or group of customers, the distributor shall perform an economic evaluation of the expansion project to determine if the future revenue from the customer(s) will pay for the capital cost and on-going maintenance costs of the expansion project.

3.2.2 If an expansion of the distributor's main distribution system is needed in order for a distributor to connect a customer, the distributor is required to make an offer to the customer. A distributor's offer shall include the following:

- C A description of the material and labour required by the distributor to build the expansion required to connect the customer.
- C An estimate of the amount that will be charged to the customer in order to construct the distribution system expansion necessary to make the connection.
- C A description and estimate of the connection charges that would apply to the offer in accordance with section 3.1.
- C Whether the offer is a firm offer or is an estimate of the costs that would be revised in the final payment to reflect actual costs incurred.

Distribution System Code

- C Whether the offer includes work for which the customer may obtain an alternative bid and, if so, the process by which the customer may obtain the alternative bid.
 - C Reference to the Conditions of Service and information on how the person requesting the connection may obtain a copy.
- 3.2.3 A distributor shall be responsible for the preliminary planning, design and engineering specifications of the work required for the distribution system expansion and connection. Specifications shall be made in accordance with the distributor's standards for design, material and construction.
- 3.2.4 In providing the estimate of the amount to be charged to the customer in order to construct the distribution system expansion referenced in paragraph 3.2.1, a distributor shall delineate estimated costs specifying those costs attributable to engineering design, materials, labour, equipment, and administrative activities.
- 3.2.5 The amount a distributor may offer to charge a customer other than a generator or distributor to construct the expansion to the distributor's distribution system shall not exceed that customer's share of the difference between the present value of the projected capital costs and on-going maintenance costs for the equipment and the present value of the projected revenue for distribution services provided by those facilities. The methodology and inputs that a distributor shall use to calculate this amount are presented in Appendix B.
- 3.2.5.1 The amount a distributor may offer to charge a generator to construct the expansion to connect a generation facility to the distributor's distribution system shall not exceed the generator's share of the present value of the projected capital costs and on-going maintenance costs for the equipment. Projected revenue and avoided costs from the generation facility shall be assumed to be zero, unless otherwise determined by rates

Distribution System Code

approved by the Board. The methodology and inputs that a distributor shall use to calculate this amount are presented in Appendix B.

- 3.2.6 If a shortfall between the present value of the projected costs and revenues is calculated, the distributor may propose to collect all or a portion of that amount from the customer, in accordance with the distributor's documented policy on capital contributions by customer class.
- 3.2.7 Unforecasted customers that connect to the distribution system during the customer connection horizon will benefit from the earlier expansion and should contribute their share. In such an event, the initial contributor shall then be entitled to a rebate from the distributor as follows:
- For a period of up to the customer connection horizon as defined in Appendix B, the initial contributor shall be entitled to a rebate without interest, based on apportioned benefit for the remaining period.
 - The apportioned benefit shall be determined by considering such factors as the relative load level and the relative line length (in proportion to the line length being shared by both parties).
- 3.2.8 If a distributor's offer to connect is a firm offer, the distributor shall provide one estimate to the customer for any plans submitted to the distributor for an expansion project, at no expense to the customer. If the customer submits revised plans, the distributor may provide a new firm offer based on the revised plans at the customer's expense.
- 3.2.9 If a distributor's offer is an estimate of the costs to construct the expansion and not a firm offer, the final amount charged to the customer shall be based on actual costs incurred, the methodology described in Appendix B and the capital contribution policy

Distribution System Code

of the distributor. The distributor shall calculate the one estimate and the final amount of customer contribution at no expense to the customer.

- 3.2.10 Section 3.2.8 and the 2nd sentence of section 3.2.9 do not apply to a customer who is a generator or is proposing to become a generator unless the customer's proposed or existing generation facility is an emergency backup generation facility.

3.3 Alternative Bids

- 3.3.1 A distributor shall inform the customer requesting a connection that the customer has the choice to obtain alternative bids for the connection and expansion facilities ("alternative bid") from qualified contractors if the offer meets the following conditions:

- Ⓒ The project requires a capital contribution from the customer; and
- Ⓒ Construction work would not involve work with existing circuits.

- 3.3.2 If a customer is interested in obtaining an alternative bid, the distributor shall, in a non-discriminatory and fair and reasonable manner:

- Ⓒ Inform the customer of the work that the customer may obtain through an alternative bid.
- Ⓒ Inform the customer that the customer may choose among the contractors that have been pre-qualified by the distributor to perform the work eligible for an alternative bid.

- 3.3.3 The distributor shall develop and document fair and reasonable criteria and processes to prequalify contractors for construction work on electricity distribution projects. The distributor shall maintain a list of contractors prequalified to perform such construction work. The criteria and processes shall not be discriminatory.

Distribution System Code

3.3.4 If a customer chooses to pursue an alternative bid and elects to obtain the services of an alternative contractor for an aspect of the expansion project, the distributor shall:

- Ⓒ Require the customer who chooses to hire an alternative contractor to select, hire and pay the contractor's costs for the work eligible for the alternative bid and to assume full responsibility for the construction of that aspect of the expansion project.
- Ⓒ Require the customer to be responsible for administering the contract or to have the customer pay the distributor to do this activity on a fee for service basis. Administering the contract includes acquisition of all required permissions, permits, and easements.
- Ⓒ Reserve the right to inspect and approve all aspects of the constructed facilities as part of a system commissioning activity, prior to connecting the constructed facilities to the existing distribution system, and be reimbursed on a fee for service basis.

3.3.5 The distributor may charge a customer that chooses to pursue an alternative bid any costs incurred by the distributor associated with the expansion project, including but not limited to the following:

- Ⓒ Costs for additional design, engineering, or installation of facilities required to complete the project that were made in addition to the original offer to connect.
- Ⓒ Costs for inspection or approval of the work performed by the contractor hired by the customer.

3.3.6 A distributor may not include in its capital cost for the expansion project any amounts relating to work paid for directly by the customers.

3.4 Enhancements

Distribution System Code

- 3.4.1 A distributor shall continue to plan and build the distribution system for reasonable forecast load growth. A distributor may perform enhancements to its distribution system for purposes of improving system operating characteristics or for relieving system capacity constraints. In determining system enhancements to be performed on its distribution system, a distributor shall consider the following:
- Ⓒ Good utility practice.
 - Ⓒ Improvement of the system to either meet or maintain required performance-based indices.
 - Ⓒ Current levels of customer service and reliability and potential improvement from the enhancement.
 - Ⓒ Costs to customers associated with distribution reliability and potential improvement from the enhancement.

3.5 Relocation of Plant

- 3.5.1 When requested to relocate distribution plant, a distributor shall exercise its rights and discharge its obligations in accordance with existing legislation such as the *Public Service Works on Highways Act*, regulations, formal agreements, easements and common law. In the absence of existing arrangements, a distributor is not obligated to relocate the plant. However, the distributor shall resolve the issue in a fair and reasonable manner. Resolution in a fair and reasonable manner shall include a response to the requesting party that explains the feasibility or infeasibility of the relocation and a fair and reasonable charge for relocation based on cost recovery principles.

4 OPERATIONS

4.1 Quality of Supply

Distribution System Code

- 4.1.1 A distributor shall follow good utility practice in managing the power quality of the distributor's distribution system and define in its Conditions of Service the quality of service standards to which the distribution system is designed and operated.
- 4.1.2 A distributor shall maintain a voltage variance standard in accordance with the standards of the Canadian Standards Association CAN3-235. A distributor shall practice reasonable diligence in maintaining voltage levels, but is not responsible for variations in voltage from external forces, such as operating contingencies, exceptionally high loads and low voltage supply from the transmitter or host distributor.
- 4.1.3 A distributor shall respond to and take reasonable steps to investigate all consumer power quality complaints and report to the consumer on the results of the investigation.
- 4.1.4 If the source of a power quality problem is caused by the consumer making the complaint, the distributor may seek reimbursement for the time and cost spent to investigate the complaint.
- 4.1.5 A distributor shall take appropriate actions to control harmonic distortions found to be detrimental to consumers connected to the distribution system. If the distributor is unable to correct a problem without adversely impacting other distribution system consumers, a distributor may choose not to make the corrections. In deciding which actions to take, a distributor should use appropriate industry standards and good utility practice as guidelines.
- 4.1.6 A distributor shall require a consumer or customer that owns equipment connected to the distribution system to take reasonable steps to ensure that the operation or failure of that equipment does not cause a distribution system outage or disturbance.
- 4.1.7 A distributor may require that any consumer or customer condition that adversely affects the distribution system be corrected immediately by the consumer or customer at the consumer's or customer's cost.

Distribution System Code

4.1.8 A distributor may direct a consumer or customer connected to its distribution system to take corrective or preventive action on the consumer's or customer's electric system when there is a direct hazard to the public or the consumer or customer is causing or could cause adverse effects to the reliability of the distributor's distribution system. If the situation is not corrected, the distributor may disconnect the consumer or customer in accordance with its disconnection policy.

4.2 Disconnection and Reconnection

4.2.1 A distributor shall establish a process for disconnection and reconnection that specifies timing and means of notification consistent with the Electricity Act, 1998. In developing physical and business processes for reconnection, a distributor shall consider safety and reliability as a primary requirement. A distributor shall document its business process for disconnection in the distributor's Conditions of Service.

4.2.2 A distributor shall inform a customer responsible for an overdue amount that it may be disconnected in accordance with section 31(2) of the *Electricity Act, 1998*.

4.2.3 It is recommended that, whenever possible, distributors provide no less than seven calendar days notice before disconnection for non-payment.

4.2.4 A distributor may disconnect without notice in accordance with a court order or for emergency, safety or system reliability reasons.

4.2.5 The physical process by which a distributor disconnects or reconnects shall reflect good utility practice and consider safety as a primary requirement.

Distribution System Code

- 4.2.6 In establishing its disconnection policy as specified in its Conditions of Service, consistent with section 30 and 31 of the Electricity Act and good utility practice, a distributor may consider the following reasons for disconnection:
- C Adverse effect on the reliability and safety of the distribution system.
 - C Imposition of an unsafe worker situation beyond normal risks inherent in the operation of the distribution system.
 - C A material decrease in the efficiency of the distributor's distribution system.
 - C A materially adverse effect on the quality of distribution services received by an existing connection.
 - C Inability of the distributor to perform planned inspections and maintenance.
 - C Failure of the consumer or customer to comply with a directive of a distributor that the distributor makes for purposes of meeting its licence obligations.
 - C Any other conditions identified in the distributor's Conditions of Service document.

4.3 Unauthorized Energy Use

- 4.3.1 A distributor shall use its discretion in taking action to mitigate unauthorized energy use. Upon identification of possible unauthorized energy use, a distributor shall notify, if appropriate, Measurement Canada, the Electrical Safety Authority, police officials, retailers that service consumers affected by the unauthorized energy use, or other entities.
- 4.3.2 A distributor shall monitor losses and unaccounted for energy use on an annual basis to detect any upward trends that may indicate the need for management policies to moderate unauthorized energy use.

Distribution System Code

4.3.3 A distributor may recover from the parties responsible for the unauthorized energy use all costs incurred by the distributor arising from unauthorized energy use, including inspection and repair costs.

4.4 System Inspection Requirements and Maintenance

4.4.1 distributor shall maintain its distribution system in accordance with good utility practice and performance standards to ensure reliability and quality of electricity service, on both a short-term and long-term basis.

4.4.2 A distributor shall perform inspection activities of its distribution system in accordance with the requirements in Appendix C attached to this Code.

4.4.3 A distributor shall perform more frequent inspections if warranted due to local conditions such as geographic location, climate, environmental conditions, technologies available to perform the inspection, type and vintage of distribution technology in place, manufacturer specifications, system design or relative importance to overall system reliability of a particular piece of equipment or portion of the distributor's distribution system.

4.4.4 A distributor shall perform inspection activities using persons qualified to identify the types of defects that could be discovered during such inspection activities. Persons performing inspection activities shall be trained to protect both themselves and the public, and to respond to emergencies that may arise as a result of inspection activities.

4.4.5 A distributor shall address any defects discovered during the inspection activities within a reasonable period of time after the discovery of the defect. A distributor shall address a defect by scheduling a more detailed inspection, by planning repair activities or by performing any other action that is an affirmative response to the discovery of the defect. A distributor shall have an internal review procedure to ensure that the identified defects and follow-up activities have been addressed appropriately.

Distribution System Code

- 4.4.6 A distributor shall determine the methodology by which inspection cycles are structured and the manner in which defects identified during inspection activities are to be repaired in accordance with good utility practice.
- 4.4.7 A distributor shall notify consumers regarding the expected duration and frequency of planned outages and provide as much advance notice as possible. A distributor shall make all reasonable efforts to minimize the duration and frequency of planned outages. The distributor's policies and procedures with respect to planned outages shall be described in the Conditions of Service.

4.5 Unplanned Outages and Emergency Conditions

- 4.5.1 A distributor may require a consumer or customer or a party to a joint use agreement to comply with reasonable and appropriate instructions from the distributor during an unplanned outage or emergency situation.
- 4.5.2 To assist with distribution system outages or emergency response, a distributor may require a customer to provide the distributor emergency access to customer-owned distribution equipment that normally is operated by the distributor or distributor-owned equipment on customer property.
- 4.5.3 During an emergency, a distributor may interrupt supply to a consumer in response to a shortage of supply or to effect repairs on the distribution system or while repairs are being made to consumer-owned equipment.
- 4.5.4 A distributor may require consumers or customers with permanently connected emergency backup generation facility to notify the distributor regarding the presence of such equipment.

Distribution System Code

- 4.5.5 A distributor shall require that a consumer's or customer's portable or permanently connected emergency backup generation facility complies with all applicable criteria of the Ontario Electrical Safety Code and does not adversely affect the distributor's distribution system.
- 4.5.6 A distributor shall develop and maintain appropriate emergency plans in accordance with the requirements of the Minister of Energy, Science and Technology and in the Market Rules, regardless of whether the distributor is a wholesale market participant. A distributor's emergency plan shall include, at a minimum, mutual assistance plans with neighbouring distributors or other measures to respond to a wide-spread emergency.
- 4.5.7 A distributor shall establish outage management policies that include the following:
- C Arrangements for on-call personnel in accordance with good utility practice.
 - C Establishment and operation of a call centre or equivalent telephone service to provide consumers with available information regarding an outage.
 - C Identification of the location of distribution circuits for emergency services and critical customers such as hospitals, water supply, health care facilities, and designated emergency shelters for coordination with other agencies.

4.6 Health and Safety and Environment

- 4.6.1 A distributor shall follow good utility practices in operating and maintaining the distribution system and shall abide by safety rules and regulations that apply to routine utility work, including but not limited to the *Occupational Health & Safety Act* R.S.O. 1990 and any associated regulations.
- 4.6.2 A distributor shall be a member of an industry-specific, recognized health and safety organization in Ontario.

Distribution System Code

- 4.6.3 A distributor shall implement an industry recognized health and safety program that includes training and regularly conducted audits. This program also will include Public Education and Public Safety initiatives.
- 4.6.4 Any problems that a distributor identifies as part of the audit shall be remedied as soon as possible or in accordance with the distributor's health and safety program.
- 4.6.5 A distributor shall have a corporate policy that addresses environmental stewardship that applies to all of the distributor's operations. A documented program supporting procedures and appropriate training should be in place to ensure compliance with environmental regulations and indicate a proactive approach to environmental damage avoidance.

5 METERING

5.1 Provision of Meters and Metering Services

- 5.1.1 A distributor shall provide, install and maintain a meter installation for retail settlement and billing purposes for each customer connected to the distributor's distribution system, subject to section 5.2.3.
- 5.1.2 A distributor may install a demand meter or interval meter for purposes of measuring demand in order to assign the customer to a rate class or to set the appropriate distribution services rate for that customer.
- 5.1.3 As of the date this Code comes into force a distributor shall have six months to provide a MIST meter installation for any existing customer that has an average monthly peak demand during a calendar year of over 1 MW. A distributor shall install a MIST meter

Distribution System Code

on any new installation that is forecast by the distributor to have a monthly average peak demand during a calendar year of over 500 kW, for the purposes of measuring energy delivered to the customer.

- 5.1.4 A distributor may set a threshold level for installation of MIST meters other than that required by section 5.1.3. as long as the threshold is delineated by customer class in the distributor's Conditions of Service and sets a threshold lower than that required by section 5.1.3.
- 5.1.5 A distributor shall provide an interval meter within a reasonable period of time to any customer who submits to it a written request for such meter installation, either directly or through an authorized party, in accordance with the Retail Settlement Code, subject to the following conditions:
- C The customer that requests interval metering shall compensate a distributor for all incremental costs associated with that meter, including the capital cost of the interval meter, installation costs associated with the interval meter, ongoing maintenance (including allowance for meter failure), verification and reverification of the meter, installation and ongoing provision of communication line or communication link with the customer's meter, and cost of metering made redundant by the customer requesting interval metering.
 - C The distributor shall determine whether the meter will be a MIST or MOST meter, subject to the requirements of this Code.
 - C A communication system utilized for MIST meters shall be in accordance with the distributor's requirements.
 - C A communication line shall be required in the case of inside or restricted access meters.
- 5.1.6 A distributor shall identify in its Conditions of Service the type of meters that are available to a customer, the process by which a customer may obtain such meters and the types of charges that would be levied on a customer for each meter type.

Distribution System Code

5.2 Metering Requirements for Generating Facilities

- 5.2.1 A distributor shall require that an Ontario Energy Board-licensed generator connected to its distribution system that sells energy and settles through the distributor's retail settlement process install a four-quadrant interval meter.
- 5.2.2 A distributor shall meter customers with generation that does not require on Ontario Energy Board licence, such as back-up capability or generation for load displacement, in the same manner as the distributor's other load customers.
- 5.2.3 A distributor shall require that a customer with an embedded generation facility connected to the distributor's distribution system install its own meter in accordance with the distributor's metering requirements and provide the distributor with the technical details of the metering installation.
- 5.2.4 Where practical, metering for an embedded generation facility shall be installed at the point of supply. If it is not practical to install the meter at the point of supply, a distributor shall apply loss factors to the generation output in accordance with the loss factors applied for retail settlements and billing.

5.3 VEE Process

- 5.3.1 Metering data collected by a distributor shall be subjected to a validating, estimating and editing (VEE) process if it is to be used for settlement and billing purposes.
- 5.3.2 A distributor shall establish a VEE process according to local practice that is fair and reasonable and provides assurance that correct data is submitted to the settlement process. The VEE process shall do the following:

Distribution System Code

- C Convert raw metering data into validated, corrected or estimated “settlement-ready” metering data suitable for use in determining settlement amounts in accordance with the settlement schedule in the Retail Settlement Code.
 - C Detect errors in metering data introduced as a result of improper operational conditions and/or hardware/software malfunctions, including failures of or errors in metering or communication hardware, and metering data exceeding pre-defined variances or tolerances.
 - C Use operational system data, including historical generation and load patterns and data collected by the distributor, as appropriate, for validating raw metering data, and for editing, estimating and correcting metering data found to be erroneous or missing.
- 5.3.3 A distributor’s VEE process for data from non-interval and MOST meters shall compare energy and demand (if applicable) readings from at least one equivalent historical billing period. A distributor shall determine the appropriate bandwidths by customer class and specify other criteria used in the VEE process.
- 5.3.4 A distributor’s VEE process for data from MIST meters shall consider industry standards specified by the IMO in its VEE process for registered wholesale meters.
- 5.3.5 A distributor shall document and make available its VEE process and criteria, and allow scrutiny of its process by customers, retailers, the Board and Measurement Canada.
- 5.3.6 A distributor shall comply with Measurement Canada standards as a minimum metering installation and measurement standard, and may apply any other practices that exceed those standards.
- 5.3.7 A distributor shall have an inspection program for complex [polyphase] metering installations and document the inspection and results of the inspection.

Distribution System Code

- 5.3.8 Where an embedded generation facility metering installation does not conform to Measurement Canada standards or the accuracy class of instrument transformers cannot be confirmed, a distributor shall require the embedded generation facility to have the metering installation, including instrument transformers, tested, and apply a Measurement Canada correction factor to meter readings until such time as standards conformance is achieved.
- 5.3.9 A distributor shall ensure that persons involved in metering services have competency in performing these services. Competency may be based on recognized qualification requirements that include a training course that meets the requirements of the tasks to be performed. Metering services provided by a person that does not have the recognized qualification requirements shall be reviewed, affirmed and documented by a person with exhibited competency.
- 5.3.10 A distributor that provides metering services directly or through a Meter Service Provider shall exercise appropriate diligence in detecting and acting upon instances of tampering with metering and service entrance equipment. Upon identification of possible meter tampering, the distributor should notify, as appropriate, Measurement Canada, police officials, the Electrical Safety Authority, or other entities.
- 5.3.11 Nothing in this Code shall affect the obligation of a distributor to comply with all Measurement Canada requirements provided that, where this Code or other conditions of licence prescribe a higher standard than that prescribed in those requirements, the distributor shall comply with the higher standard.
- 5.3.12 A distributor shall respond to customer and retailer metering disputes, and shall establish a fair and reasonable charge for costs associated with resolution of these disputes. If the complaint is substantiated, the charge shall not be applied. In

Distribution System Code

resolving the dispute, a distributor may use a qualified, independent organization at anytime during the dispute resolution process.

6 DISTRIBUTORS' RESPONSIBILITIES

6.1 Responsibilities to Load Customers

This section applies to load customers other than customers with existing or proposed embedded generation facilities that are not emergency backup generation facilities, and embedded distributors.

- 6.1.1 A distributor shall make every reasonable effort to respond promptly to a customer's request for connection. In any event a distributor shall respond to a customer's written request for a customer connection within 15 calendar days. A distributor shall make an offer to connect within 60 calendar days of receipt of the written request, unless other necessary information is required from the load customer before the offer can be made.
- 6.1.2 A distributor has an implied contract with any customer that is connected to the distributor's distribution system and receives distribution services from the distributor. The terms of the implied contract are embedded in the distributor's Conditions of Service, the Rate Handbook, the distributor's rate schedules, the Distributor's licence and the Distribution System Code.
- 6.1.3 A distributor may require a customer to enter into a Connection Agreement with the distributor if the distributor believes that the customer has characteristics that require an explicit document to describe the relationship between the distributor and the customer. Suggested information to be included in the Connection Agreement with customers is listed in Appendix D.

Distribution System Code

- 6.1.4 A distributor shall enter into a Connection Agreement with a customer that is connected to the distributor's distribution system and is a wholesale market participant.
- 6.1.5 Before entering a property to carry out an activity described in section 40 of the *Electricity Act*, the person shall, in accordance with subsection 40(8) of the *Electricity Act*:
- provide reasonable notice of the entry to the occupier of the property;
 - in so far as is practicable, restore the property to its original condition; and
 - provide compensation for any damages caused by the entry that cannot be repaired.

6.2 Responsibilities to Generators

- 6.2.1 Section 6.2 does not apply to the connection or operation of an emergency backup generation facility.
- 6.2.2 A distributor shall enter into a Connection Agreement with all existing generators who have a generation facility connected to the distributor's distribution system and prior to connecting a new generation facility. Where a distributor does not have a Connection Agreement with an existing generator that has a generation facility connected to the distributor's distribution system, the distributor shall be deemed to have an implied contract with the generator. The terms of the implied contract are embedded in the distributor's Conditions of Service, the Rate Handbook, the distributor's rate schedules, the distributor's licence and the Distribution System Code.

Connection Process

Distribution System Code

- 6.2.3 A distributor shall promptly make available a generation connection information package (the “package”) to any person who requests this package. The package shall contain the following information:
- (a) the process for having a generation facility connected to the distributor’s distribution system, including any form necessary for applying to the distributor;
 - (b) information regarding any approvals from the ESA, the IMO, OEB, or a transmitter that are required before the distributor will connect a generation facility to its distribution system;
 - (c) the technical requirements for being connected to the distributor’s distribution system including the metering requirements; and
 - (d) the standard contractual terms and conditions for being connected to the distributor’s distribution system.
- 6.2.4 Subject to all applicable laws, a distributor shall make all reasonable efforts in accordance with the provisions of section 6.2 to promptly connect to its distribution system a generation facility which is the subject of an application for connection.

Connection of Micro-Generation Facilities

- 6.2.5 A distributor shall require a person that applies for the connection of a micro-embedded load displacement generation facility to the distributor’s distribution system to provide, upon making the application, the following information:
- (a) the name-plate rated capacity of each unit of the proposed generation facility and the total name-plate rated capacity of the proposed generation facility at the connection point;
 - (b) the fuel type of the proposed generation facility;
 - (c) the type of technology to be used; and
 - (d) the location of the proposed generation facility including address and account number with the distributor where available.

Distribution System Code

- 6.2.6 Where the proposed micro-embedded load displacement generation facility is located at an existing customer connection, the distributor shall, within 15 days of receiving the application, make an offer to connect or provide reasons for refusing to connect the proposed generation facility . The distributor shall give the applicant at least 30 days to accept the offer to connect and the distributor shall not revoke the offer to connect until this time period has expired. The distributor shall not charge for the preparation of the offer to connect.
- 6.2.7 The distributor shall make any necessary metering changes and connect the applicant's micro-embedded load displacement generation facility to its distribution system within 5 days of the applicant informing the distributor that it has received all necessary approvals, providing the distributor with a copy of the authorization to connect from the ESA, entering into a Connection Agreement in the form set out in Appendix E and paying the distributor for the costs of any necessary metering changes.

Connection of Other Generation Facilities

- 6.2.8 Sections 6.2.9 to 6.2.20 apply to the connection to a distribution system of an embedded generation facility which is not a micro-embedded load displacement generation facility.
- 6.2.9 Where a person who is considering applying for the connection of a generation facility to the distributor's distribution system requests a preliminary meeting with the distributor and provides the required information, the distributor shall provide a time when it is available to meet with the person which is within 15 days of the person requesting the meeting. For the purposes of this section, the following is the required information:

Distribution System Code

- (a) the name-plate rated capacity of each unit of the proposed generation facility and the total name-plate rated capacity of the generation facility at the connection point;
 - (b) the fuel type of the proposed generation facility;
 - (c) the type of technology to be used; and
 - (d) the location of the proposed generation facility including address and account number with the distributor where available.
- 6.2.10 At the preliminary meeting, the distributor shall discuss the basic feasibility of the proposed connection including discussing the location of existing distribution facilities in relation to the proposed generation facility and providing an estimate of the time and costs necessary to complete the connection. The distributor shall not charge for its preparation for and attendance at the meeting.
- 6.2.11 A distributor shall require a person who applies for the connection of a generation facility to the distributor's distribution system to, upon making the application, pay their impact assessment costs and provide the following information:
- (a) the information set out in section 6.2.9 if this has not already been provided to the distributor;
 - (b) a single line diagram of the proposed connection; and
 - (c) a preliminary design of the proposed interface protection.
- 6.2.12 The distributor shall provide an applicant proposing to connect a small embedded generation facility with its assessment of the impact of the proposed generation facility, a detailed cost estimate of the proposed connection and an offer to connect within:
- (a) 60 days of the receipt of the application where no distribution system reinforcement or expansion is required; and

Distribution System Code

- (b) 90 days of the receipt of the application where a distribution system reinforcement or expansion is required.
- 6.2.13 The distributor shall provide its assessment of the impact of the proposed generation facility within:
- (a) 60 days of the receipt of the application in the case of a proposal to connect a mid-sized embedded generation facility; and
 - (b) 90 days of the receipt of the application in the case of a proposal to connect a large embedded generation facility.
- 6.2.14 The distributor's impact assessment shall set out the impact of the proposed generation facility on the distributor's distribution system and any customers of the distributor including:
- (a) any voltage impacts, impacts on current loading settings and impacts on fault currents;
 - (b) the connection feasibility;
 - (c) the need for any line or equipment upgrades;
 - (d) the need for transmission system protection modifications; and
 - (e) any metering requirements.
- 6.2.15 Any material revisions to the design, planned equipment or plans for the proposed generation facility and connection shall be filed with the distributor and the distributor shall prepare a new impact assessment within the relevant time period set out in section 6.2.13 or 6.2.14.
- 6.2.16 In the case of an application for the connection of a mid-sized or large embedded generation facility, once the impact assessment is provided to the applicant, the distributor and the applicant have entered into an agreement on the scope of the project and the applicant has paid the distributor for the cost of preparing a detailed

Distribution System Code

cost estimate of the proposed connection, the distributor shall provide the applicant with a detailed cost estimate and an offer to connect by the later of 90 days after the receipt of payment from the applicant and 30 days after the receipt of comments from a transmitter or distributor that has been advised under section 6.2.17.

- 6.2.17 Where a distributor is preparing a detailed cost estimate in accordance with section 6.2.16 with respect to a proposed large or mid-sized embedded generation facility, the distributor shall advise any transmitter or distributor whose transmission or distribution system is directly connected to the distributor's distribution system that it is preparing an estimate, within 10 days of receiving payment from the applicant. Where a distributor is preparing a detailed cost estimate in accordance with section 6.2.12 with respect to a proposed small embedded generation facility, the distributor shall, where the distributor believes a system directly connected to its system may be impacted by the proposed generation facility, advise any transmitter or distributor whose transmission or distribution system is directly connected to the distributor's distribution system that it is preparing an estimate, within 10 days of receiving payment from the applicant.
- 6.2.18 Once the applicant has entered into a connection cost agreement with the distributor and has provided the distributor with detailed engineering drawings with respect to the proposal, the distributor shall conduct a design review to ensure that the detailed engineering plans are acceptable.
- 6.2.19 The distributor shall have the right to witness the commissioning and testing of the connection of the generation facility to the distributor's distribution system.
- 6.2.20 Once the applicant informs the distributor that it has received all necessary approvals, provides the distributor with a copy of the authorization to connect from the ESA and enters into the Connection Agreement, the distributor shall act promptly to connect the generation facility to its distribution system.

Distribution System Code

- 6.2.21 Subject to any delays in commissioning and testing of the generation facility which are beyond the control of the distributor, a distributor shall connect a proposed small embedded generation facility within:
- a) 60 days of the applicant taking the steps set out in section 6.2.20, where no distribution system reinforcement or expansion is required; and
 - b) 180 days of the applicant taking the steps set out in section 6.2.20, where a distribution system reinforcement or expansion is required.
- 6.2.22 A Connection Agreement for a small, mid-sized or large embedded generation facility shall be in the form set out in Appendix E where a standard form of contract is set out in Appendix E for that size of embedded generation facility.
- 6.2.23 Material on the process for connecting a generation facility to a distribution system is set out in Appendix F.1. This material is for information purposes only and the provisions of the Code govern in the case of any conflict.
- 6.2.24 A distributor may by written agreement with an applicant who is proposing to connect a small, mid-sized or large embedded generation facility provide that the process for connecting the generation facility to be followed is the process set out for a smaller category of embedded generation facility, including a micro-embedded load displacement generation facility.

Technical Requirements

- 6.2.25 A distributor shall ensure that the safety, reliability and efficiency of the distribution system is not materially adversely affected by the connection of a generation facility to the distribution system. A distributor shall require that new or significantly modified generation facilities meet the technical requirements specified in Appendix F.2.

Distribution System Code

- 6.2.26 A distributor shall ensure that the distribution system is adequately protected from potential damage or increased operating costs resulting from the connection of a generation facility. Despite section 2.2.1, if damage to the distribution system or increased operating costs result from the connection of a generation facility other than a micro-embedded load displacement generation facility, the distributor shall be reimbursed for these costs by the generator.
- 6.2.27 A distributor shall require that a generator with a generation facility connected to the distributor's distribution system has a regular, scheduled maintenance plan to ensure that the generator's connection devices, protection systems and control systems are maintained in good working order. This requirement will be provided for in the connection agreement.
- 6.2.28 All equipment that is connected, operating or procured or ordered before May 1, 2002 is deemed to be in compliance with the technical requirements of this code.
- 6.2.29 A distributor may require that equipment deemed compliant under section 6.2.28 be brought into actual compliance with the technical requirements of this code within a specific reasonable time period where there is:
- (a) a material deterioration of the reliability of the distribution system resulting from the performance of the generator's equipment;
 - (b) a material negative impact on the quality of power of an existing or a new customer resulting from the performance of the generator's equipment; or
 - (c) a material increase in generator capacity at the site where the equipment deemed compliant is located.
- 6.2.30 The distributor may act in accordance with section 6.2.29, once the distributor has developed rules and procedures for requiring equipment to be brought into actual compliance and these rules and procedures have been provided to the generator.

Distribution System Code

6.3 Responsibilities to Other Distributors

- 6.3.1 A distributor shall make every reasonable effort to respond promptly to another distributor's request for connection. A distributor shall provide an initial consultation with another distributor regarding the connection process within thirty (30) days of receiving a written request for connection. A final offer to connect the distributor to the host distributor's distribution system shall be made within ninety (90) days of receiving the written request for connection, unless other necessary information outside the distributor's control is required before the offer can be made.
- 6.3.2 A distributor shall make a good faith effort to enter into a Connection Agreement with a distributor connected to the distributor's distribution system. The contents and format of the Connection Agreement are in the discretion of the distributors that participate in the Connection Agreement but must conform to the requirements of this Code. Appendix G provides an example of the process that distributors should follow in providing a connection to another distributor.
- 6.3.3 The reliability of supply and the voltage level at the delivery point from a host distributor's distribution system to an embedded distributor's distribution system shall be as good as or better than what is provided to the host distributor's other distribution customers.
- 6.3.4 A distributor shall not build any part of its distribution system in another distributor's licensed service area except under the following conditions:
- The part of the distribution system that is to be located inside another licensed service area is dedicated to the delivery of electricity to the distributor who owns the distribution facilities; and
 - There is no apparent opportunity for both distributors to share the distribution facilities; and

Distribution System Code

- The distributor in whose service area the distribution facilities are to be located determines that the presence of the distribution facilities in that location does not impinge on its distribution operations.

6.3.5 A distributor that owns equipment in another distributor's licensed service area shall allow that distributor access to the equipment for the following reasons:

- Ⓒ Emergencies.
- Ⓒ When the equipment may cause a violation of a licence condition by the distributor who is licensed for the service area.
- Ⓒ Upon a reasonable request by the distributor who is licensed for the service area.
- Ⓒ In accordance with any arrangement between the two distributors.

6.4 Sharing Arrangements Between Distributors

6.4.1 A distributor that owns distribution facilities in another distributor's licensed service area, and decides to share those distribution facilities with the distributor licensed to serve the service area, shall have an agreement that describes the terms of the sharing arrangement with the other distributor.

6.4.2 An operating agreement for multiple ownership circuits shall include, among other conditions, clauses that require that:

- Ⓒ Each section owner provide downstream owners with fault current information and protection settings of upstream protective devices.
- Ⓒ Each section owner provide upstream owners with load forecasting information.
- Ⓒ Each section owner maintain phase balance within generally acceptable industry standards.

Distribution System Code

- C Each section owner ensure generally acceptable industry standards pertaining to power quality and voltage levels are adhered to on the section owner's portion of the feeder.
- C The owner of the feeder breaker be responsible for maintaining appropriate relay settings for overall feeder protection.
- C Each distributor be responsible to provide the required information to accomplish appropriate relay settings for overall feeder protection, including information on feeder characteristics and loading information.

6.4.3 In existing or new multiple ownership circuits, a distributor shall be responsible for maintenance, protection and power quality of the distributor's own portion of the shared feeder. The distributor shall ensure that its portion of the feeder has proper fault protection and voltage within proper limits. This generally would require the owner of each section of the feeder to provide for suitable overcurrent protection devices and voltage regulators, as appropriate, at the upstream boundary and suitable metering, if not already available for settlement purposes, at the downstream boundary.

6.5 Load Transfers

- 6.5.1 A distributor (referred to in this section as the geographic distributor) that provides distribution services through a load transfer may continue to do so under the following conditions:
- C The load transfer customer enters into a Connection Agreement or is deemed to have an implied contract with the geographic distributor and interacts only with the geographic distributor.
 - C The geographic distributor provides service to the load transfer customer in accordance with its Conditions of Service and bills the load transfer customer in accordance with its regulated charges and rates.

Distribution System Code

- C The geographic distributor is responsible for system reliability or equipment failures associated with the distribution system equipment it owns or operates that is used to deliver electricity to the load transfer customer.
- C The geographic distributor allows the distributor that owns the connection assets (referred to as the physical distributor) access to the distribution equipment used to service the load transfer customer, as required for system reliability and safety.
- C The geographic distributor is responsible to the physical distributor for all charges and costs incurred by the load transfer customer for all costs defined in Retail Settlement Code, including distribution costs, competitive electricity costs and non-competitive electricity costs provided to the customer through the physical distributor's distribution system.
- C The geographic distributor is responsible for facilitating the load transfer customer's access to retail competition and shall interact with any competitive retailer chosen by the customer.

6.5.2 A physical distributor that provides distribution services through a load transfer may continue to do so under the following conditions:

- C The physical distributor refers the load transfer customer or a retailer that intends to service the load transfer customer to the geographic distributor for all issues. The geographic distributor is responsible to work with the physical distributor on any issues that are the direct responsibility of the physical distributor.
- C The physical distributor is responsible for system reliability or equipment failures associated with the distribution system equipment it owns or operates that is used to deliver electricity to the load transfer customer.
- C The physical distributor allows the geographic distributor access to its equipment, as required for system reliability and safety.

Distribution System Code

6.5.3 During the five year period after this Code comes into effect, a physical distributor shall be obligated to continue to service an existing load transfer customer unless otherwise negotiated between the physical distributor and geographic distributor.

6.5.4 During the five year period after this Code comes into effect, a geographic distributor that services a load transfer customer shall either:

- a) negotiate with a physical distributor that provides load transfer services so that the physical distributor will be responsible for providing distribution services to the customer directly, including application for changes to the licensed service areas of each distributor; or
- b) expand the geographic distributor's distribution system to connect the load transfer customer and service that customer directly.

Once a load transfer customer enters into a Connection Agreement or implied contract with the physical distributor, the physical distributor shall have sole responsibility for that customer.

6.5.5 A distributor may enter into a new load transfer agreement with another distributor with leave of the Board.

6.6 Provision of Information

6.6.1 A distributor shall communicate general market and educational information to consumers connected to its distribution system as required by the Board.

6.6.2 A distributor shall inform a person about the person's obligations to the distributor, and shall monitor and require compliance to ensure that the person is meeting its obligations. A distributor shall inform the consumer or customer about the distributor's rights to disconnect service.

Distribution System Code

- 6.6.3 At the request of a consumer, a distributor shall provide a list of retailers who have Service Agreements in effect with the distributor. The list shall conform to the requirements of section 2.5 of the Affiliate Relationships Code. The list should inform the consumer that an alternative retailer does not have to be chosen in order to ensure that the consumer receives electricity and the terms of service that are available under Standard Supply Service.
- 6.6.4 A distributor shall not provide information on products retailed by a retailer.
- 6.6.5 Upon receiving an inquiry from a consumer connected to its distribution system, the distributor shall either respond to the inquiry if it deals with the distributor's distribution services or provide the consumer with contact information for the entity responsible for the item of inquiry, in accordance with chapter 7 of the Retail Settlement Code.
- 6.6.6 An embedded distributor that receives electricity from a host distributor shall provide load forecasts or any other information related to the embedded distributor's system load to the host distributor, as determined and required by the host distributor. A distributor shall not require any information from another distributor unless it is required for the safe and reliable operation of either distributor's distribution system or to meet a distributor's licence obligations.