

# CONDITIONS OF SERVICE

For Hydro One Networks Inc. Distribution Customers

Effective Date: March 1, 2019



## PREFACE

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The purpose of this Conditions of Service document is to provide our customers with a document that describe Hydro One Networks Inc.'s ("Hydro One") operating practices and connection policies and set out the terms and conditions upon which Hydro One offers, and the Customer accepts, Distribution Services for the types and level of service available to customers within Hydro One's service area.

The Distribution System Code requires that the Conditions of Service be readily available for review by the general public. In addition, the most recent version of the document must be provided to the Ontario Energy Board (OEB), who in turn will retain it on file for the purpose of facilitating dispute resolutions in the event that a dispute cannot be resolved without the OEB's intervention.

This document follows the Table of Contents outline appended to the Distribution System Code. Hydro One has also chosen to expand on the required Conditions of Service content to encompass local characteristics and other specific requirements.

- **Section 1** – The "Introduction" section includes any related codes and governing laws that cover the Conditions of Service, the rights and obligations of the Customer and of Hydro One and the process for resolving disputes.
- **Section 2** – The "Distribution Activities - General" section contains references to services and requirements common to all customer classes. This section covers items such as Rates, Billing, Connection/Disconnection, Power Quality, and Available Voltage
- **Section 3** – The "Customer Class Specific" section contains references to services and requirements, which are specific to individual customer classes. This section covers items such as Metering, Service Entrance Requirements, Demarcation Point, and Special Contracts.

Other sections in this document include the Glossary of Terms and Appendices.

Any Comments on Hydro One's Conditions of Service can be emailed to [CustomerComments@HydroOne.com](mailto:CustomerComments@HydroOne.com).

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## **REFERENCES**

1. **Electricity Act – 1998, S.O. 1998. c. 15. Sched. A –**  
<http://www.ontario.ca/laws/statute/98e15>
2. **Ontario Energy Board Act – 1998, S.O. 1998, c. 15, Sched. B –**  
<http://www.ontario.ca/laws/statute/98o15/>
3. **Standard Supply Services Code –**  
[http://ontarioenergyboard.ca/oeb/\\_Documents/Regulatory/Distribution\\_System\\_Code.pdf](http://ontarioenergyboard.ca/oeb/_Documents/Regulatory/Distribution_System_Code.pdf)
4. **Distribution System Code –**  
[http://ontarioenergyboard.ca/oeb/\\_Documents/Regulatory/Distribution\\_System\\_Code.pdf](http://ontarioenergyboard.ca/oeb/_Documents/Regulatory/Distribution_System_Code.pdf)
5. **Hydro One Distribution License ED-2003-0043**
6. **Electrical Safety Authority – Landscaping and Tree Trimming Guidelines**  
<http://www.esasafe.com/powerlinesafety/at-home-and-play/lanscaping-and-trimming/>

## SECTION 1 – INTRODUCTION

### 1.1 Identification of Distributor and Service Area

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These Conditions of Service describe Hydro One Networks Inc.'s ("Hydro One") operating practices and connection policies and set out the terms and conditions upon which Hydro One offers, and the Customer accepts, Distribution Services.

Nothing contained in this document or in any contract for the supply of electricity by Hydro One will prejudice or affect any rights, privileges, or powers vested in Hydro One by law under any federal or Ontario statutes or any regulations or codes thereunder.

For definitions of the terms used in this document, please refer to **section 4**. Capitalized terms used in this document have the meaning as defined in that section.

Hydro One is a corporation incorporated under Ontario's *Business Corporations Act* and is an electricity Distributor licensed by the Ontario Energy Board (OEB) to distribute electricity in the service area described in Hydro One's Distribution Licence, ED-2003-0043 (the Licence). This service area may be changed from time to time with Ontario Energy Board approval. Details of the Licence may be viewed at [www.HydroOne.com](http://www.HydroOne.com).



## SECTION 1 – INTRODUCTION

### 1.2 Related Codes and Governing Laws

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Hydro One and the Customer will comply with all Applicable Laws, including the most recent editions of the following documents:

1. *Electricity Act, 1998* (the Electricity Act)
2. *Ontario Energy Board Act, 1998* (the OEB Act)
3. the Licence
4. Affiliate Relationships Code for Electricity Distributors and Transmitters
5. Distribution System Code
6. Retail Settlement Code
7. Standard Supply Service Code
8. Relevant Rate Orders

If there is a conflict between these Conditions of Service and any of the above, the provisions set out in the documents listed above will govern in order of priority indicated above. If there is a conflict between these Conditions of Service and a Connection Agreement executed by the Customer and Hydro One, the Connection Agreement will govern. If conditions, rights, obligations, or other terms appear in these Conditions of Service but not in any of the documents listed above, or in a Connection Agreement, they will not be interpreted as a conflict or be deemed grounds for finding a conflict.

When planning and designing for electricity service, Customers and their agents must comply with all Applicable Laws including applicable Ontario and Canadian electrical codes.

All work must be conducted in accordance with the latest edition of Ontario's *Occupational Health and Safety Act* (OHSA) and,

1. where applicable, the Infrastructure Health and Safety Association (IHSA) Rule Book; and
2. the Regulations for Construction Projects made under OHSA.

## SECTION 1 – INTRODUCTION

### 1.3 Interpretation

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In this document:

1. Words referring to the singular include the plural, and vice versa.
2. The use of one gender (s/he) is used to refer to any gender.
3. The word “person” includes not only a natural person but also a firm, a body corporate, an unincorporated association and an authority; reference to a “person” includes the heirs, executors, administrators, successors, substitutes (including, without limitation, persons taking by novation) of that person.
4. The word “its” includes “his”, “her”, or “their”.
5. The words “including”, “include(s)” and “included” will be interpreted as being without limitation.
6. The words “prompt” and “promptly” means performed in an expeditious manner and without undue delay, using due diligence, and with the intent of completing a required act or task as quickly as practicable.
7. The reference “Hydro One may” means in Hydro One’s sole and absolute discretion.
8. An agreement, representation or warranty on the part of, or in favour of, two or more persons binds or is for the benefit of them jointly and severally.
9. Specified periods of time refer to business days, and the number of days from a given day (or the day of an act or event) is to be calculated starting on the day following the given day (or the day of an act or event).
10. Reference to a day is to be interpreted as the period of time commencing at midnight and ending 24 hours later and does not include weekends and Public Holidays.
11. Documents or provisions referred to in these Conditions of Service also include any amendments, supplements, or replacements of those documents or provisions.
12. Headings are for convenience and will not affect the interpretation of these Conditions of Service.

## SECTION 1 – INTRODUCTION

### 1.4 Amendments and Changes

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These Conditions of Service, and any amendments thereto form the part of the contract between Hydro One and any connected Customer, Retailer or Generator and supersede all previous Conditions of Service, oral or written, of Hydro One and any of its predecessor municipal electric utilities and Local Distribution Companies, as of the effective date.

Hydro One will issue an advance public notice by means of a note on the Customer's bill or included with the Customer's bill to advise of any changes to the Conditions of Service. Once Customers receive this notification, they have ten days to provide comments using the contact information included in the notice.

The most recent Conditions of Service can be downloaded from [www.HydroOne.com/COS](http://www.HydroOne.com/COS). Customers may also contact Hydro One to obtain a current printed version. Hydro One may charge a fee for providing a copy of these Conditions of Service.

## SECTION 1 – INTRODUCTION

### 1.5 Contact Information

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#### **General inquiries**

Customers can reach Hydro One at 1-888-664-9376, Monday to Friday, from 7:30 A.M. to 8:00 P.M. E.T. and by e- mail at [CustomerCommunications@HydroOne.com](mailto:CustomerCommunications@HydroOne.com) or by writing to:

Hydro One Networks Inc.  
P.O. Box 5700  
Markham, Ontario  
L3R 1C8

**To report a power outage, Customers can call 1-800-434-1235 or the number shown on the bill. Outage telephone calls are answered 24 hours per day, 7 days a week.**

### 1.6 Customer Rights and Obligations

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#### 1.6.1 Accuracy of Information

To provide Customer service, deliver and/or supply energy, manage Customer accounts, assess credit history and determine the need for a security deposit, Hydro One may require certain information from the Customer, including, but not limited to, the Customer's credit report, driver's licence, property tax bill, purchase or lease agreements, articles of incorporation and/or business registration. Customers must provide Hydro One with information that is true, complete and correct. Hydro One may verify the accuracy of all information provided and, if required, may obtain additional credit information from a consumer reporting agency. If Hydro One is unable to establish the identity of the Customer based upon the information provided, Hydro One may disconnect or deny service to the Customer (see [section 2.2](#)).

#### 1.6.2 Space and Access

Customers will provide Hydro One, free of charge or rent, with a convenient and safe place for Hydro One's Facilities and Equipment, for example, a Meter Installation on the Customer's premises and/or Customer Equipment. Hydro One is not liable for any damages resulting from, arising out of, or related to the presence of Hydro One Facilities and Equipment on Customers' premises.

Customers will only allow Hydro One employees, authorized agents, or persons lawfully permitted to do so, to repair, remove, replace, alter or inspect Hydro One Facilities and Equipment on the Customer's premises and/or Customer Equipment.

In addition to Hydro One's rights under [Section 40](#) of the Electricity Act, Hydro One employees and its authorized agents may enter the Customer's property at any time, in order to:

1. install, inspect, read, calibrate, maintain, repair, alter, remove or replace all or any part of a Meter Installation
2. inspect, maintain, repair, alter, remove, replace or disconnect wires or other facilities used to transmit or Distribute electricity
3. inspect, maintain, repair, alter, remove and replace Hydro One Facilities and Equipment, such as sentinel lights
4. perform switching operations, or interrupt the Customer's supply, in order to maintain or improve the supply system or to provide new or upgraded services to other Customers.

Hydro One's employees and their authorized agents will use reasonable efforts to enter the Customer's premises during normal business hours and will identify themselves with proper identification upon request.

If Meter Installations or meter rooms are located inside the Customer's premises, Customers will provide Hydro One with key access upon request. Hydro One's written approval is needed for any exceptions to this requirement.

If the Meter Installation is inaccessible, Hydro One will require Customers to relocate it to an accessible location, at the Customer's expense.

#### 1.6.3 Customer Equipment and Civil Works

**“Customer Equipment”** means all electrical and mechanical equipment owned by the Customer which is used by the Customer to supply the Customer's home or business and does not include any Hydro One Facilities and Equipment. Customer Equipment always includes the base of the meter and Secondary Service supports and civil works. Customer Equipment also includes any Customer-owned transformers and conductor.

## SECTION 1 – INTRODUCTION

### 1.6 Customer Rights and Obligations

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Customers are responsible for:

1. installation and maintenance of Customer Equipment, including maintaining the vegetation around their power lines;
2. ensuring that all their equipment complies with all applicable laws (including the Electrical Safety Code); and
3. properly identifying and connecting Customer Equipment for metering and operation purposes.

Where applicable, Customer Equipment will be subject to acceptance by Hydro One (to ensure the Distribution system is adequately protected) and subject to the approval of the Electrical Safety Authority. Customers are solely responsible for protecting their own property.

Customers must inspect their Customer Equipment on a regular basis. Clearances will conform to all regulations, including the Building Code and the Electrical Safety Code. Customers will repair or replace, in a timely fashion, any Customer Equipment that may affect the safety, integrity or reliability of the Distribution System. If the Customer fails to take such action within the time specified by Hydro One, or if the repairs are not considered adequate by Hydro One or an inspection authority, Hydro One may disconnect the Customer's electricity supply (see [section 2.2](#)), and/or carry out the repairs at the Customer's expense. Hydro One will not be liable for any damages, other than physical damage to the Customer Equipment directly caused by entry on the Customer's property.

Customers wishing to install or remove Neutral Ground Resistors (NGR) on the secondary side of the service transformer must obtain Hydro One's permission before proceeding (see [section 2.3.7.1 D](#)).

Customers must ensure that their electrical equipment does not cause any unacceptable voltage fluctuations, voltage unbalance, harmonics or other disturbances that could negatively affect other Customers connected to the Distribution System, or Hydro One Facilities and Equipment (see [section 2.3.3](#)).

#### **1.6.4 Temporary Disconnect**

With 10 days' prior notice from the Customer, Hydro One will disconnect and reconnect, without charge, the Customer's service once each calendar year and during normal business hours to enable Customers to upgrade or maintain their Customer Equipment and safely clear trees and vegetation near Customer-owned lines.

#### **1.6.5 Responsibility for Damage to Hydro One Facilities and Equipment**

Hydro One Facilities and Equipment located on the Customer's premises are in the care of and at the risk of the Customer. If Hydro One Facilities and Equipment is damaged or destroyed by fire, or by any cause other than ordinary wear and tear, the Customer will pay Hydro One the value of the Hydro One Facilities and Equipment or the cost of repairing or replacing same, whichever Hydro One chooses at its sole discretion.

Customers must not build, plant, place or maintain or cause to be built, planted, placed or maintained any structure, tree, shrub, landscaping or other thing that would or could obstruct access to (including, but not limited to, the ability to manually, automatically or remotely read a Metering Installation), endanger all or any part of the Hydro One Facilities and

### 1.6 Customer Rights and Obligations

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Equipment, interfere with the proper and safe operation of all or any part of the Hydro One Facilities and Equipment or all or any part of the Distribution System (or any part thereof), or affect Hydro One's compliance with any Applicable Laws. Hydro One may disconnect the supply of electricity to the Customer and/or carry out the removal of the structure, tree, shrub, landscaping or other thing for any non-compliance of the above at the Customer's expense. Hydro One will not be liable for any damages, other than physical damage that results directly from entry on the Customer's property.

#### 1.6.6 Direction to Make Corrective or Preventive Action

When there is a direct hazard to the public, or if the Customer is causing or could cause adverse effects to the reliability of the Distribution System, Hydro One may require a Customer to take corrective or preventive action on the Customer's equipment and/or system.

#### 1.6.7 Testing Customer's Load

Customers must allow Hydro One to install and use meters and other equipment to conduct tests to determine the electrical characteristics of the Customer's load.

#### 1.6.8 Automatic Reclosing Facilities

Hydro One installs facilities for the automatic reclosing of circuit breakers and reclosers in order to restore the Distribution System. Hydro One may change reclosing times from time to time, and Customers are required to provide, at their expense:

1. adequate protective equipment for any electrical apparatus that might be adversely affected by reclosing facilities; and
2. equipment required for the proper reconnection of any Customer apparatus or equipment, without adversely affecting the proper functioning of the reclosing facilities.

#### 1.6.9 Registration/Deregistration as a Wholesale Market Participant

Customers who wish to register or de-register with the IESO as a Wholesale Market Participant must provide Hydro One with written notification and complete the necessary documentation at least 60 days in advance (see [section 3.5](#)). This will allow Hydro One to make the necessary changes to its records.

#### 1.6.10 Accounts in More Than One Name

If an account is opened in more than one person's name, all those named will be responsible, collectively, as well as individually, for complying with these Conditions of Service. All named will also be responsible, collectively, as well as individually, for paying the associated Rates and charges billed on the account. If the account is in arrears or the Customers are in breach of an obligation to Hydro One, Hydro One may choose to claim against any one individual or all of the account holders named on the account.

#### 1.6.11 Hydro One Acquired Facilities and Equipment

Where any portion of any:

1. Acquired Facilities and Equipment used to supply an Acquired Customer; and/or
2. Customer Equipment owned by an Acquired Customer,

complied with the Conditions of Service of the Acquired Distributor or the Customer's previous Distributor (in the case of a service area amendment) but does not comply with Hydro One's

## SECTION 1 – INTRODUCTION

### 1.6 Customer Rights and Obligations

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Conditions of Service, Hydro One may require that those assets be brought into compliance with Hydro One's then-current Conditions of Service in the following circumstances:

1. the asset has reached End of Life;
2. the Customer requires an upgrade or an increase in capacity;
3. there is the imposition of an unsafe worker situation beyond normal risks inherent in the operation of the Distribution System;
4. there is an adverse effect on the reliability and safety of the Distribution System;
5. there is a material decrease in the efficiency of the Distribution System;
6. there is a material adverse effect on the quality of Distribution Services received by an existing Connection;
7. to comply with a court order or an order by the OEB; or
8. to comply with an order of the Electrical Safety Authority.

Compliance with Hydro One's then-current Conditions of Service may require, without limitation, the Acquired Customer to:

1. install its own transformer to replace the transformer that was previously owned by Hydro One as part of the Acquired Facilities and Equipment where under Hydro One's Conditions of Service, Hydro One does not provide transformers of that size and the Customer does not want or cannot be served from the size of transformer that Hydro One will install and own in accordance with its then-current Conditions of Service;
2. take ownership of a portion of wires, poles, cables, transformers, any other structures, equipment, all other appliances and equipment that Hydro One does not provide under its then-current Conditions of Service and upgrade or replace same; or
3. transfer a portion of its Customer Equipment to Hydro One where Hydro One normally owns such equipment under its then-current Conditions of Service.

#### 1.6.12 Tree and Vegetation Management

Subject to any prior agreements, Customers are responsible for all initial and continuing tree trimming, tree and brush removal for all new and existing Secondary and Primary Services on a Customer's property. Clearances must conform to the Electrical Safety Code.

If Customers build distribution or Sub-Transmission lines where ownership is to be transferred to Hydro One upon connection, clearances must conform to Hydro One's Distribution Standards.

Hydro One strongly recommends that the Customer hire a certified utility arborist or a qualified electrical contractor for this work (see [section 2.1.2.4](#)). Clearances between trees and power lines must be at least one metre for secondary lines and at least four metres for primary lines. Diagrams illustrating clearance requirements can be viewed at [www.HydroOne.com/COS](http://www.HydroOne.com/COS).



## SECTION 1 – INTRODUCTION

### 1.7 Hydro One's Distributor Rights

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#### 1.7.1 Access to Customer Property

[Section 40](#) of the *Electricity Act* authorizes Hydro One to have access to the Customers' property.

#### 1.7.2 Tree and Vegetation Management

To ensure public safety and the continued reliable operation of its Distribution System, Hydro One routinely maintains vegetation on, and adjacent to, its rights-of-way and easements on a continued and cyclical basis. The timing and scope of this maintenance depends on considerations such as system assessments, rights-of-way limitations, storm damage, tree condition and vegetation type.

Where vegetation maintenance on its rights-of-way or easements affects trees and vegetation on Private Property, Hydro One will notify property owners or occupants of its maintenance plans prior to performing the work. However, in the event of emergencies, Hydro One may be unable to notify the property owner in advance, in which case, it may perform the work without prior notice to property owners.

Hydro One may enter any land for the purpose of cutting down or removing trees, branches or other obstructions, if Hydro One thinks it is necessary in order to maintain the safe and reliable operation of the Distribution System.

#### 1.7.3 Ability to Transfer Arrears from One Account to Another

Hydro One has the right to transfer arrears for Distribution Services, electricity supplied, or other services provided by Hydro One from one account in a Customer's name to any other account in that same Customer's name, irrespective of the account's Rate classification or whether the account is in the name of other person(s) in addition to the Customer (see [section 1.6.10 Accounts in More Than One Name](#); and [section 2.1.7 B Implied Contracts](#)).

## SECTION 1 – INTRODUCTION

### 1.8 Disputes

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Hydro One has a well-defined Customer complaint process:

**Step 1: Contact Hydro One** - Customers may call 1-888-664-9376 Monday to Friday, from 7:30 a.m. to 8:00 p.m. E.T.

**Step 2: Speak to a Supervisor** – If the issue is not resolved, Customers may ask to speak to a supervisor, who will work with them to resolve the concern.

**Step 3: Escalate to Customer Relations** - Customer complaints that cannot be resolved by calling the Customer Contact Centre are referred to Hydro One's Customer Relations department. A member of Customer Relations will contact the Customer, research, investigate, and follow up (when necessary) with the complainant to ensure resolution and closure.

Hydro One's Customer Relations may be reached as follows:

Website: [www.HydroOne.com](http://www.HydroOne.com)

Email: [CustomerRelations@HydroOne.com](mailto:CustomerRelations@HydroOne.com)

**Step 4: Direct concerns to the Hydro One Ombudsman** – Customers who go through Hydro One's complaint process and still are not satisfied may contact Hydro One's Ombudsman.

Hydro One's Ombudsman may be reached as follows:

Telephone: 1-844-608-8756

Website: [www.HydroOneOmbudsman.com](http://www.HydroOneOmbudsman.com)

Email: [Ombudsman@HydroOne.com](mailto:Ombudsman@HydroOne.com)

## SECTION 1 – INTRODUCTION

### 1.9 Liability

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Hydro One shall be liable to a Customer and a Customer shall be liable to Hydro One only for any damages that arise directly out of the willful misconduct or negligence of:

1. Hydro One in providing Distribution Services to the Customer;
2. The Customer in being connected to the Distribution System; or
3. Hydro One or the Customer in meeting their respective obligations or exercising their respective rights under these Conditions of Service, their licences and any other Applicable Laws.

Notwithstanding the above, neither Hydro One 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.

## SECTION 1 – INTRODUCTION

### 1.10 Force Majeure

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Other than for any amounts due and payable by the Customer to Hydro One or by Hydro One to the Customer, neither Hydro One nor the Customer shall be deemed to have committed an event of default in respect of any obligation under these Conditions of Service if prevented from performing that obligation, in whole or in part, because of a Force Majeure Event.

Hydro One shall not be liable for any delay or failure in the performance of any of its obligations under these Conditions of Service due to any Force Majeure Event.

If a Force Majeure Event prevents either party from performing any of its obligations under these Conditions of Service, that party shall:

1. other than for Force Majeure Events related to Acts of God, promptly notify the other party of the Force Majeure Event and a good faith assessment of the effect that the event will have on the former party's 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 practical;
2. not be entitled to suspend performance of any of its obligations under these Conditions of Service to any greater extent or for any longer time than the Force Majeure Event requires it to do;
3. 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;
4. keep the other party continually informed of its efforts; and
5. other than for Force Majeure Events related to Acts of God, provide written notice to the other party when it resumes performance of any obligations affected by the Force Majeure Event.

If the Force Majeure Event is a strike, lockout or other labour dispute involving Hydro One's employees or authorized agents, Hydro One shall be entitled to discharge its obligations to notify its Customers in writing by means of placing a notice in the local newspaper, and, notwithstanding (3) above, the settlement of any strike, lockout or labour dispute involving Hydro One's employees or authorized agents shall be within the sole discretion of Hydro One or its authorized agents, none of whom shall be under any of the obligations in (3) above.

## SECTION 2 – DISTRIBUTION ACTIVITIES - GENERAL

### 2.1 Connections

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#### A. Early Consultation

Customers must submit the following information to Hydro One, well before construction begins:

1. required in-service date;
2. service entrance capacity and voltage rating of the service entrance equipment;
3. detailed information on heating equipment, air conditioners and any other appliances and/or equipment with a high electricity consumption;
4. detailed information for the connection of an Embedded Generation Facility for all Generators being connected in parallel to the Distribution System;
5. survey plan or site plan, at the request of Hydro One, indicating the proposed location of the service entrance equipment relative to public rights-of-way and property lot lines;
6. all information required to set up an account for billing purposes; and
7. additional information as noted on the Hydro One website at [www.HydroOne.com](http://www.HydroOne.com) or specified in writing by Hydro One.

#### B. Common Service Taps

**“Common Service Tap”** – “Hydro One owned connection assets or Customer owned assets consisting of a primary or secondary distribution line located on Customer property that supplies more than one Customer”.

Customers must provide, at their expense, and in compliance with the Electrical Safety Code, a secondary or primary pole, or an underground primary voltage line, for common service taps.

Hydro One will supply two neighbouring Customers from a common service tap only when the following conditions are met:

1. the Customer and Hydro One agree on the location of (the portion of) the Customer’s supplied and built facility that will be owned by Hydro One (“Common Line”);
2. the Common Line is located on property owned by one or both of the neighbouring Customers ;
3. the Common Line to be owned by Hydro One is built to Hydro One’s Distribution Standards;
4. the Common Line is transferred with easements and tree-clearing rights to Hydro One for a nominal fee; and
5. an access road is provided when requested by Hydro One.

If all of the above conditions cannot be met, each Customer will supply, install and own a separate line on its own property; or the Customers must agree, among themselves, to share the Customer-owned line.

#### C. Temporary Connections

If a Customer requires temporary service, the following charges apply:

1. For temporary service that will be relocated to a permanent service site at a later date, the Customer will pay Hydro One’s standard temporary service fee.
2. For temporary service to sites with a finite Connection and cancellation period (for example, construction sites), Hydro One provides the material cost of standard transformation and metering without charge, but the Customer will pay all other labour and material costs to install and remove the service, as well as for all Distribution Facilities installed to provide the service, based on Hydro One’s estimated costs.

### 2.1 Connections

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#### D. Service and Supply Locations

Hydro One reserves the right to determine service supply and Connection locations. Customers require Hydro One's approval prior to the construction of electrical facilities.

Hydro One will provide one service layout or estimate without charge. If the Customer changes any of its Connection requirements after the initial layout or estimate is provided, or requests another estimate or layout for the same Connection, the Customer shall pay Hydro One for any updates to the initial layout or estimate for the same Connection.

#### E. Number of Delivery Points

Normally Hydro One permits only one delivery point per property. However, where having only one delivery point is not technically feasible, or where it creates excessive costs to the Customer, and where sufficient capacity is readily available to supply additional delivery point(s) and future expected load growth, Hydro One may, in its sole discretion, connect additional delivery point(s) on the same property. Customers are responsible for all costs to connect additional delivery points. Each delivery point is metered separately and billed according to its rate classification and the combined capacity of all delivery points cannot exceed the delivery point capacity outlined below, unless agreed to by Hydro One.

#### F. Delivery Point Capacity

The maximum size of Primary Service or Secondary Service at any delivery point is as follows:

1. **Single Phase Customer Connection:** 167 kVA of transformation capacity and load. Customers requiring service above 167 kVA must either install, or convert to, a Three Phase service.
2. **Three Phase Customer Connection:**
  - i. If the Distribution voltage is 13 kV or less, 501 kVA of transformation capacity and load
  - ii. If the Distribution voltage is above 13 kV, or the Distribution Facility is supplied from a distribution station that is directly connected to a high voltage transmission line, Hydro One will determine the maximum size based on system configuration and capability.

#### G. Transformation - Overhead Transformers

For standard secondary voltages, the maximum overhead transformer sizes provided by Hydro One are:

1. **Single Phase Customer Connection:** 167 kVA
2. **Three Phase Customer Connection:** 501 kVA

Customers requiring non-standard secondary voltages or connection voltages above 27.6 kV are responsible for installing, owning, maintaining and operating their own transformer and will be entitled to a Customer-supplied transformation allowance. Customer-supplied transformers must be properly sized, acceptable to Hydro One, and meet the energy efficiency standards in CSA C802.1.

#### H. Transformation - Pad- Mounted Transformers (underground type)

Maximum transformer sizes supplied by Hydro One are:

1. **Single Phase Customer Connection:** 167 kVA
2. **Three Phase Customer Connection:** 500 kVA (Y-Y)

Customers requesting pad-mounted transformers will pay the difference in material and installation costs between the overhead transformation and the pad-mount transformation. Customers will

### 2.1 Connections

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supply and install an appropriate transformer pad at their expense. Customers should contact Hydro One for further information.

Customers requiring non-standard secondary voltages or connection voltages above 27.6 kV must install, own, maintain and operate their own pad-mounted transformer and will be entitled to a Customer-supplied transformation allowance. Customer-supplied transformers must be properly sized, acceptable to Hydro One, and meet the energy efficiency standards in CSA C802.1.

#### **I. Transformation - Station Transformers**

Customers requiring transformation capacity in excess of the sizes noted above must supply the station site, pad, transformers, fencing, structure and distribution line on Private Property, in accordance with the Electrical Safety Code. Customer-supplied transformers must be properly sized, acceptable to Hydro One, and meet the energy efficiency standards in CSA C802.1.

Customer-supplied transformers will have high-voltage protection that is compatible with, and coordinates with, the Distribution System protection.

Transformation ownership allowances apply, where approved by the OEB.

Hydro One does not supply live bushing (station type) transformers for new Connections.

Existing Hydro One-owned station type transformers will be maintained to the end of their useful life. At the end of the unit's useful life, the Customer will supply, install, own and maintain the replacement unit.

#### **J. Transformation - Additional Station Transformers**

If Customers require additional transformation due to load growth, and their transformer is owned by Hydro One, they can:

1. purchase Hydro One's transformer and switchgear, subject to Ontario Energy Board approval, and add additional Customer-owned transformation; or
2. install Customer-owned transformation and request that Hydro One remove the existing Hydro One transformer.

#### **K. Winter Weather**

Underground installations can be difficult in winter: equipment operates differently at extreme cold temperatures, and laying underground cable is often impossible in such conditions. There is also a risk in winter that the work cannot be commenced or completed within a specified time frame.

Hydro One, at its discretion, will determine whether installation will occur and will keep Customers informed of these decisions.

If specialized equipment is required to make a winter connection, Customers will pay the incremental costs.

#### **2.1.1 Connection / Building that Lies Along**

Where a Customer makes a written request to Hydro One to connect a Building that Lies Along Hydro One's Distribution System, Hydro One will provide a Connection. Hydro One provides a Basic Connection at no charge for all Customers, excluding those who want to connect an Embedded Generation Facility.

### 2.1 Connections

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Basic Connection consists of:

1. supply and installation of standard overhead transformation (according to the Customer's rate class), including secondary bus extensions or installations complete with conductor and anchoring;
2. supply and installation of standard metering;
3. an estimate and layout for the new service;
4. connection of the Secondary Service or Primary Service at the Ownership Demarcation Point and the Operational Demarcation Point; and
5. for new residential rate class Connections only, supply and installation of up to 30 metres overhead secondary conductor for up to 200-amp service, or an equivalent credit toward underground conductor. New residential Connections with Primary Services will be credited for up to 30 metres of secondary wire.

Where applicable, Customers must pay Hydro One for the following costs, which are not included in the cost of a Basic Connection:

1. for Year-round Residential and Seasonal Residential Customer classes, the difference in cost between overhead and underground secondary wire;
2. incremental costs associated with the supply and installation of underground transformation;
3. supply and installation of poles, anchors, all secondary conductor over 30 metres, hardware, and structures, as required, on Customer's property; and
4. all changes required to the Distribution System (exclusive of the secondary bus installation), including poles, anchoring and hardware.

Where applicable and at their own expense, Customers will also be responsible for:

1. tree and vegetation management on their property;
2. easements or property agreements, as required by Hydro One;
3. fees, permits, or other permissions required to connect the service; and
4. amounts payable to Hydro One if the Customer is being added to a protected Single or Three Phase line constructed on or after January 1, 1993.

These same terms may also apply to Customers requiring an increase to existing service capacity (provided the increase does not require an Expansion of the Distribution System).

For Embedded Generation Facilities, please refer to Section 3.4 of these Conditions of Service for more information. If Hydro One determines within five years of the date of the original Connection that the Connection was provided to connect an Embedded Generation Facility, the Customer will pay Hydro One for the full connection costs incurred, as described in section 3.4 of these Conditions of Service.



### 2.1 Connections

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#### 2.1.2 Expansions / Offer to Connect

When Hydro One receives a Customer's written request to connect a building that is in its service territory, Hydro One will provide an 'Offer to Connect'. If a request for connection or service capacity increase requires an Expansion, Hydro One performs an economic evaluation, using a discounted cash flow model that complies with Appendix B of the Distribution System Code, to determine the Customer's contribution, if any, towards the projected capital costs (e.g. equipment, labour, material) and ongoing maintenance costs of the Expansion facilities. If the Present Value of the future revenue is not sufficient to recover the Expansion costs, the Customer will pay a capital contribution in accordance with the requirements of Section 3.2 and Appendix B of the Distribution System Code. Additionally, where a capital contribution is required towards the cost an Expansion, Hydro One will collect an Expansion Deposit.

For Customers other than Embedded Generators, the economic evaluation will be based on Hydro One's estimate of the Customer's monthly consumption based on information provided by the Customer. If the Customer produces load forecasts that are acceptable to Hydro One, these will be used for the evaluation.

For Customers requesting a service capacity increase that requires an Expansion, Hydro One will perform an economic evaluation, using a discounted cash flow model in compliance with Appendix B of the Distribution System Code, to determine the Customer's capital contribution.

Hydro One uses a revenue horizon of up to 25 years to project expected forecasted revenues based on the forecasted load from the Expansion.

The load forecast and the revenue horizon used for the economic evaluation are at the sole discretion of Hydro One.

##### 2.1.2.1 Expansion Deposits

The economic evaluation performed for an Expansion considers the incremental distribution revenues associated with the forecast connections or load. These forecast revenues offset a portion of the costs associated with the Expansion in the economic evaluation, resulting in a capital contribution that is less than the full capital and ongoing maintenance cost of the expansion project. An Expansion Deposit protects other Hydro One ratepayers in the event that the connections or load associated with the Expansion do not materialize as forecast.

As of March 18, 2019, Distributors must collect an Expansion Deposit for any Expansion where a capital contribution is required. Distributors may collect an Expansion Deposit where there is no capital contribution required.

Hydro One will require an Expansion Deposit as follows:

- For Residential and Energy Billed General Service Customers, a nominal \$100.00 Expansion Deposit is required, only when a capital contribution is required.
- For Demand Billed General Service and Sub-Transmission Customers where Hydro One's investment towards the expansion is greater than \$100,000 or where a capital contribution is required, an Expansion Deposit of up to the Net Present Value ("NPV") of capital costs plus the NPV of distribution line Operations, Maintenance and Administration ("OM&A") less any capital contribution associated with the Expansion is required. Hydro One will consider project specific and asset risks in determining the amount of the Expansion Deposit.

### 2.1 Connections

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- For Developers and other Distributors, Hydro One will require an Expansion Deposit equal to the NPV of capital costs plus the NPV of distribution line OM&A less any capital contribution associated with the Expansion.

Expansion Deposit refunds are based on the degree to which the Customer's forecast of connections or demand is completed over the customer connection horizon – a maximum of five years. More specifically, once the facilities are energized (and subject to the requirement for a warranty), Hydro One will annually return the percentage of the Expansion Deposit which reflects the actual connections (for residential developments) or actual demand (for commercial and industrial customers) that materialized in that year as a proportion of the total forecast over the five years. If at the end of that five-year period, the forecast connections or demand have not fully materialized, Hydro One has the right according to Sec. 3.2.24 of the DSC to retain the remaining portion of the Expansion Deposit.

Where an Expansion requires no capital contribution from the customer, Hydro One will base the Expansion Deposit refund on an adjusted load forecast. This adjusted load forecast would be equal to the forecast load required to bring the Expansion economic evaluation NPV to zero i.e. the break-even point between the connecting customer and Hydro One ratepayers. This would prevent the undesirable outcome of Hydro One retaining Expansion Deposit amounts in situations where the risk to ratepayers has already declined to zero.

Where Hydro One has requested a nominal Expansion Deposit (for example for a residential or small commercial premises), it will be refunded upon the connection of the property.

In accordance with the DSC Sec. 3.2.24, where work was completed through an alternative bid process, Hydro One will retain a minimum of 10% of the Expansion Deposit value for warranty purposes for at least two years, beginning:

- (a) when the last forecasted connection in the expansion project materializes (for residential developments) or the last forecasted demand materializes (for commercial and industrial developments); or
- (b) at the end of the five-year customer connection horizon,

whichever comes first. Hydro One will use this amount to address any issues which arise during the warranty period and return any remaining portion at the end of that time.

#### **2.1.2.2 Capital Cost Recovery Agreement / Customer Service Contract / Connection Cost Agreement**

Hydro One's Expansion Deposit requirements effective on March 18, 2019, do not affect any previously executed Capital Cost Recovery Agreement made between Customers and Hydro One, which continue to be valid until such time as they terminate.

Prior to March 18, 2019, Customers may receive Customer Service Contracts with a Capital Cost Recovery Agreement, which are not yet executed. Provided that the Customer Service Contract and the Capital Cost Recovery Agreement are both signed and delivered to Hydro One by the Customer within the 180-day period referenced in the Customer Service Contract, Hydro One will not require that such Customers pay an Expansion Deposit in accordance with Section 2.1.2.1.

Where an Expansion is required to connect an Embedded Generation Facility, other than a Micro-Embedded Generation Facility, the terms associated with the Expansion and any requirement to provide an Expansion Deposit will be stipulated in the Connection Cost Agreement. For more information, please refer to section 3.4 of these Conditions of Service.

### 2.1 Connections

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For more information on Capital Cost Recovery Agreements, Customer Service Contracts, or Connection Cost Agreements, see Appendix A to these Conditions of Service.

#### 2.1.2.3 Staking and Engineering Fees

Hydro One provides staking and design services at the Customer's expense. Fees and payments received are accounted for in the discounted cash flow calculation.

#### 2.1.2.4 Offer to Connect

Hydro One will respond to requests for Connection within 15 calendar days after receiving the request. In its response, Hydro One will specify any information that is required and any obligations that must be met in order for Hydro One to process the request. Offers to connect are sent within 60 calendar days after receiving all necessary information and the Customer's meeting of all its obligations.

The initial offer to connect is at no cost to Customers and includes:

1. a statement as to whether the offer is firm or an estimate that will be revised in the future to reflect actual costs incurred
2. information related to these Conditions of Service and how to obtain a copy
3. a statement as to whether a capital contribution is required from the Customer
4. a statement as to whether Hydro One requires an Expansion deposit, and if so, the amount
5. a description of any Connection charges that apply, the amount, and whether they will be charged separately from the capital contribution
6. the amounts to be paid if the Customer is being added to a protected Single or Three Phase line constructed on or after January 1, 1993
7. any additional information pertinent to the offer.

If Customers need to pay a capital contribution and, or, an Expansion Deposit for an Expansion, Hydro One will also provide details of:

1. the amount of the Expansion Deposit the Customer must pay if any
2. the amount of the capital contribution the Customer must pay
3. the calculation used to determine the amount of the capital contribution, including all of the assumptions and inputs used to produce the economic evaluation
4. the process by which Customers can obtain alternative bids, if applicable
5. a description, and the cost of, the work that is eligible for alternative bid and the work that is not eligible for alternative bid associated with the Expansion, divided into the following categories:
  - (i) labour (design, engineering and construction)
  - (ii) materials
  - (iii) equipment
  - (iv) overhead (including administration)
6. additional costs such as inspection costs, that may be incurred as a result of selecting the alternative bid option
7. the Connection amount that was factored into the economic evaluation (if the offer is for a residential Customer)
8. the connection charge description and amount that was factored into the economic evaluation (if the offer is for a non-residential Customer and if Hydro One has chosen to recover the non-residential Connection charge as part of its revenue requirement).

### 2.1 Connections

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## SECTION 2 – DISTRIBUTION ACTIVITIES - GENERAL

### 2.1.2.5 Alternative Bids

For the alternative bid eligible portion of the Expansion, Customers may seek alternative bids from Qualified Contractors where the Expansion requires a capital contribution from the Customer.

Information on electrical contractors is available from the following sources:

[www.ECAO.org](http://www.ECAO.org) under Find a Contractor

[www.yellowpages.ca](http://www.yellowpages.ca) under Electric Contractors

**A. Work that is not eligible for alternative bid includes:**

1. preliminary planning, design and engineering specifications for work required for the Expansion and Connection
2. construction work on existing Hydro One Facilities and Equipment

**B. The Customer will:**

1. select, hire, and pay the Qualified Contractor;
2. assume full responsibility for construction of that aspect of the Expansion;
3. administer the contract (or pay Hydro One to perform this service on an Actual Cost basis), including all permissions, permits, and property rights as required;
4. construct the Expansion (line extension) to meet Hydro One's design requirements.
5. pay Hydro One an inspection fee to inspect the construction;
6. pay the cost of any easements or property agreements as required by Hydro One;
7. prior to connection, transfer ownership of the facilities that are on public property or that serve more than one Customer, to Hydro One for a nominal fee;
8. pay the Actual Cost of any additional design and engineering; and
9. pay all applicable Electrical Safety Authority inspection fees.

**C. Hydro One will:**

1. provide design specifications for the construction; and
2. inspect and authorize the line for Connection.

**D. Ownership of Alternative Bid Construction**

As a condition of Connection, the following apply to the ownership of assets.

**D.1 Lines on Road Allowance**

This section does not apply in situations where Hydro One has agreed to a "joint use" or other contractual arrangement with a utility (including Distributors, telephone companies, and cable providers) or Generator regarding lines constructed on a road allowance.

Except where it foresees no future use for the assets, Hydro One will own Distribution lines constructed on road allowances, including those connecting Embedded Generation Facilities. This provides Hydro One with the ability to effectively and efficiently plan its Distribution System to connect other Customers without unnecessary duplication of infrastructure and to ensure that the safety and reliability of the Distribution System is maintained.

Customers will own the lines constructed on road allowances where Hydro One has no Distribution assets if Hydro One determines that it has no future use for such assets and agrees to such ownership in writing.

### 2.1 Connections

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Any lines constructed on a road allowance that are to be transferred to Hydro One are subject to the following conditions:

1. The lines must be constructed to Hydro One's Distribution Standards and on an approved route;
2. The Customer must provide any required easements and cutting rights for lands which the Customer owns; and
3. If third parties own any part of the lands on which the line is constructed, the Customer must obtain easements and cutting rights from these owners, on Hydro One's behalf, prior to transfer.

#### **D.2 Lines on Private Property**

Normally, lines constructed on Private Property are owned and maintained by the Customer. However, a line constructed to Hydro One's Distribution Standards (along with the required easements and cutting rights) will be transferred to Hydro One, at Hydro One's discretion, if the line supplies more than one Customer or if there is a physical indication of a possible new connection. If Hydro One requests it, the Customer will provide an access road.

If a Customer separates part of its service (by severing land or the sale of a business), there are three options for the supply of electricity to the new Customer:

1. The line will be upgraded to Hydro One's Distribution Standards, and ownership, easements and cutting rights are transferred to Hydro One;
2. The Customers will agree among themselves on a shared supply arrangement; or
3. A new line will be constructed to supply the new Customer, at the new Customer's cost.

Where another Customer requests connection to an existing Customer-owned line, and the owner agrees to transfer ownership of the line to Hydro One, the new Customer is responsible for the costs of upgrading the line to Hydro One's Distribution Standards, and for any easements and cutting rights required by Hydro One.

#### **D.3 Lines on Crown Land**

Lines on Crown Land are treated similarly to lines on Private Property.

#### **D.4 Lines on Unopened Road Allowance**

Lines on unopened road allowance are treated similarly to those on Private Property. Where an unopened road separates two opened roads, Hydro One may agree to take over ownership of the new distribution line if the line is constructed to its Distribution Standards and if any easements and cutting rights needed to maintain the line are provided to Hydro One.

#### **D.5 Other Restrictions**

Lines to be transferred to Hydro One must be constructed to Hydro One's Distribution Standards and are subject to Hydro One's agreement with the route selection, taking into consideration factors such as operation and maintenance, reliability and restoration times.

#### **D.6 Submarine Cable**

Submarine cable supplying a single Customer may be owned and maintained by the Customer. Submarine cable that has been constructed to Hydro One's Distribution Standards and that has the appropriate crossing approvals will be transferred to Hydro One, at the discretion of Hydro One, with any required easements, where such cable supplies more than one Customer or where there is a physical indication or a reasonable expectation of a possible new connection.

### 2.1 Connections

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#### 2.1.2.6 Rebates

##### A. Rebates for Customers Who Paid a Capital Contribution - Expansions

If a new Customer connects within the Customer Connection Horizon to a previously built expansion, Hydro One will calculate and collect the rebate amount to be paid to initial contributor(s) of the Expansion from the new Customer.

Hydro One will calculate the rebate amount to be paid to the initial contributor(s) and collected from a new Customer in accordance with the rules in Section 3.2.27 of the Distribution System Code. No rebates will be paid to the initial contributor(s) of an Expansion after the Customer Connection Horizon has expired.

##### B. Rebates for Refund Administration Service

Rebates will normally be made to the present property owner unless a Refund Administration Service Agreement is in force that specifies otherwise.

##### B.1 Single and Three Phase Lines constructed January 1, 1993 to October 31, 2000

If a Customer is added to a Single or Three Phase line constructed between January 1, 1993 and October 31, 2000 and there is a Refund Administration Service Agreement in effect for that line, Hydro One will rebate the new Customer's fair share of the original cost of the shared portion of the line. The original capital contribution will not be depreciated.

##### B.2 Three Phase Lines constructed prior to January 1, 1993

If a Customer is added to a Three Phase line constructed prior to January 1, 1993, Hydro One will rebate in accordance with the agreement made between Ontario Hydro and the initial contributor(s), but will not collect from the new Customer an amount equal to the new Customer's fair share of the original cost of the shared portion of the line.

#### 2.1.3 Connection Denial

Hydro One may deny connection to any Customer for any of the following reasons:

1. the Customer refuses to sign and deliver any agreements required by these Conditions of Service;
2. the connection contravenes the laws of Canada or Ontario;
3. the connection will cause Hydro One to violate a condition of its licence;
4. the connection will have an adverse effect on the reliability or safety of the Distribution System;
5. the connection will cause a material decrease in the efficiency of the Distribution System;
6. the connection will have a material adverse effect on the quality of the distribution service received by an existing Customer (e.g. voltage flicker, harmonics and power outages);
7. the connection will result in the discriminatory access to Distribution Services by other Customers;
8. the person requesting the connection owes Hydro One money;
9. the Customer refuses, or is unable to provide, current and valid identification or references to confirm its identity ;
10. the connection is not in compliance with these Conditions of Service;
11. the connection does not meet Hydro One's design requirements;

### 2.1 Connections

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12. the connection will create an unsafe situation for workers or the public (beyond the normal risks inherent in the operation of the Distribution System);
13. the connection will cause Hydro One to be unable to perform planned inspections or maintenance;
14. by order of the Electrical Safety Authority;
15. the Customer does not have the requisite approval(s) for the connection from the Electrical Safety Authority; or
16. the premises being connected are the subject of a stop work order under the Building Code Act (Ontario).
17. Energy diversion, fraud, or abuse on the part of the person requesting the connection as determined by Hydro One.

If connection is denied, Hydro One will notify the Customer of the reason(s) in writing and, if possible, will suggest remedies. It is the Customer's responsibility to resolve the issue in order for the connection to be performed.

#### 2.1.4 Inspections Before Connections

All Customer electrical installations must be inspected and approved by the Electrical Safety Authority. Hydro One will not permit a Customer to connect to the Distribution System until Hydro One receives the approval from the Electrical Safety Authority.

If Hydro One requires the Customer to perform specific work related to their electrical installation on the Customer's premises, the Customer must demonstrate to Hydro One that the required work has been completed before the Customer is allowed to connect.

Prior to connection, Hydro One will inspect all electrical connections to its Distribution System and provisions for metering to ensure that they satisfy all Hydro One's technical requirements to permit Connection, unless a protective device that has been accepted by Hydro One separates the Connection.

At any time, Hydro One may choose to reinspect any electrical connection or Meter Installation.

#### 2.1.5 Relocation of Hydro One Facilities and Equipment

Customers or third parties requesting a relocation of a Hydro One-owned asset must pay Hydro One all costs associated with relocating that asset, except where there is applicable legislation or a prior agreement made with the former Ontario Hydro (i.e., prior to April 1, 1999) or Hydro One Networks Inc.

If the relocation is from public to Private Property, Hydro One will use reasonable efforts to acquire the necessary easements at the requesting Customers expense. The Customers will pay for the necessary easements or authorization equivalent and for the cost to carry out the work.

#### 2.1.6 Easements

##### A. Unregistered Rights

Any land subject to unregistered rights prior to April 1, 1999, will continue to be subject to those rights until they expire or until the holder of those rights releases them.

##### B. Registered Easements

When requested by Hydro One, the Customer shall grant to Hydro One an easement for new or modified connections to permit Hydro One to undertake the installation, operation, relocation and

### 2.1 Connections

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maintenance of its Facilities and Equipment. Customers will provide a registered easement with respect to Hydro One Facilities and Equipment that are located on the Customer's property, or third party owned property when requested by Hydro One.

Registered easements are required for any of the following:

1. any single- or multi-phase line, underground or submarine cables, poles, anchors or aerial occupation where the line crosses Private Property, including any common service taps
2. anchors on Private Property that support 44 kV lines, 27.6 kV lines, Three Phase feeders, and any single- or multi-phase structures that support reclosers, voltage regulators or capacitor banks if the poles are located on a road allowance
3. any new facilities and equipment being added to Hydro One Facilities and Equipment which are the subject of an existing unregistered easement (that does not include replacement or maintenance of the existing Hydro One Facilities and Equipment).
4. any submarine cable that is tapped into to continue and cross private property to serve other customers whether primary overhead or primary underground.
5. Where Hydro One's Equipment and Facilities are on the road allowance, Hydro One requires occupation rights on private property if conductors overhang the private property or if the terrain is such that Hydro One requires access onto the private lands to construct or maintain its Facilities or Equipment

#### **C. Occupation Rights**

Occupation rights permit Hydro One to enter on the property and construct Hydro One Facilities and Equipment. The right is obtained over a specific strip of land, which is usually of a standard width, and which must be wide enough to ensure that no trees can touch the line and provide enough room to safely work on the Hydro One Facilities or Equipment.

#### **D. Easement Corridor Width – Overhead Lines**

The standard width of the easement strip is 5 meters (6 meters for 44 kV) on either side of the centre of the line for total width of 10 meters (12 meters for 44 kV). If the entire line is located on private property away from the road allowance, a total width of 10 meters (12 meters for 44 kV) is required for the easement. If the line is on a road allowance, the width of the easement required on private property is the remainder of the 5 meter requirement measured from the centre of the line less the distance from the centre of the line to the property limit.

### **2.1.7 Contracts**

#### **A. Opening and Closing of Accounts**

Property owners or occupants who request to open an account with Hydro One are deemed to be Hydro One Customers and agree to assume responsibility for the Rates and charges for the distribution services provided to their service address. Completing an account setup will be done either by phone or in writing and will establish the contract with Hydro One. If the Customer is a corporation or limited partnership, an authorized signing officer must sign the new account agreement. A lawyer or person with Power of Attorney can open an account on the Customer's behalf. Additionally, any person who uses electricity at the premises is deemed to be a Customer with an implied contract in accordance with section 2.1.7 B of these Conditions of Service.

Hydro One may require Customers to pay a security deposit (see section 2.4.3 A) and connection charges at the time of account setup or at a later date.



### 2.1 Connections

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Customers requesting to close an account must notify Hydro One five business days in advance to allow Hydro One time to read the meter at the service address and issue a final bill. If a Customer no longer wants electricity to be provided to the service address, Hydro One may remove certain delivery equipment, including power lines, transformers and meters.

If a request is made for reconnection, the new Customer will pay the costs to reinstall appropriate delivery equipment. If service has been disconnected from a premise for six months or longer, an Electrical Safety Authority inspection is required.

Hydro One requires an active account and Customer in order to maintain availability of meter infrastructure and/or service. When Customers notify Hydro One that they are no longer responsible for the account, or if they request to close an account, a final bill will be issued for the account. If a new Customer has not assumed responsibility for services, Hydro One may disconnect the property and may remove Hydro One Facilities and Equipment from the property.

For account management purposes (including billing, collections and communications), Hydro One may consolidate the accounts of Customers with multiple services, including services at multiple locations or premises, and treat these as a single account.

#### **B. Implied Contracts**

Hydro One has an implied contract with any Customer who is connected to the Distribution System and receives Distribution Services from Hydro One. The terms of the implied contract are outlined in these Conditions of Service, the Electricity Distribution Rate Handbook, Hydro One's Rate Schedule, the Licence, the Distribution System Code, the Standard Supply Service Code and the Retail Settlement Code, all as amended from time to time.

Any person who takes or uses electricity delivered and/or supplied by Hydro One by way of an implied contract is liable to pay for it, and the implied contract will be binding upon their heirs, administrators, executors, successors and assigns.

In the absence of a contract for electricity with a tenant, the property owner will pay the cost for electricity consumed until:

1. a Customer contacts Hydro One to set up an account and agrees to pay for the services provided to the property; or
2. the owner(s) advises Hydro One that the owner is no longer responsible for the account.

#### **C. Landlord and Tenant Agreements**

A tenant who opens an account with Hydro One is deemed to have agreed to be a Hydro One Customer and has accepted responsibility for the electricity charges provided to the tenants service address. If a tenant closes the account, Hydro One will adhere to the date provided by the tenant, regardless of the terms of any written or oral agreement between that tenant and the landlord or owner, and a final bill will be issued for the account.

A landlord or owner may enter into an agreement with Hydro One to accept responsibility for the electricity charges for any and/or all units listed at a service address until:

1. a new tenant opens an account and agrees to accept responsibility for the charges at the service address; or
2. the landlord/owner terminates the agreement.

### 2.1 Connections

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A landlord or owner may inform Hydro One, by telephone or in writing, of the landlord or owner's agreement to be responsible for the charges. If a new account is set up in a landlord or owner's name, the following terms and conditions apply:

1. Hydro One will open an account for electrical service to the properties in the landlord or owner's name as soon as any vacating tenant's account has been closed;
2. The landlord or owner will be responsible for the new account(s), and any electricity charges for service provided, at any and all units listed at a service address, and will comply with these Conditions of Service; and
3. A new account setup charge will apply to the new account(s) and will appear on the first electricity bill. Even if the property is vacant, monthly service charges and electricity consumption will be billed to the new account(s).

The above agreement will be in effect unless the Customer otherwise notifies Hydro One, either orally or in writing. For greater clarity, if a tenant has closed an account and a new tenant or landlord or owner had not assumed responsibility for services delivered to the property, Hydro One may Disconnect and remove the Hydro One Facilities and Equipment from the property in accordance with [section 2.1.7 A](#).

It is the landlord's responsibility to ensure that Hydro One is aware of any changes in contact, mailing and/or billing information. Where landlord information is not known, the above will not apply, and Hydro One will disconnect service without an active account.

#### **D. Customer Service Contract**

All Customers wishing to connect to the Distribution System must sign a Customer Service Contract (as described in Appendix A), except those Customers proposing to expand or develop an industrial/commercial or residential subdivision or condominium; or a Generator who has signed a Connection Cost Agreement. The signed Customer Service Contract must be received before Hydro One begins any construction related to the connection. The Customer Service Contract will describe the work to be performed by Hydro One with respect to the connection and any other conditions set forth in Hydro One's offer to connect, as well as the payment terms (including capital contributions and other fees and charges payable).

#### **F. Multi-Service Developments**

Customers planning to expand or develop an industrial/commercial or residential subdivision, or to develop a condominium, are required to sign a Multi-Service Connection Cost Agreement (formerly called a Subdivision Agreement). Details are included in Appendix A.

#### **G. Connection Cost Agreement**

Generators intending to connect a 'Small', 'Mid-Sized' or 'Large' Embedded Generation Facility to the Distribution System must enter into a Connection Cost Agreement with Hydro One. Details are included in Appendix A.

#### **H. Connection Agreements**

##### **H.1 Sub-Transmission Customers (including Embedded Distributors)**

Hydro One can require any Sub-Transmission Customer, Embedded Distributor, and any Wholesale Market Participant to sign a Connection Agreement. Details about this type of agreement are included in Appendix A.

### 2.1 Connections

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#### H.2 Embedded Generation Facilities

Hydro One requires all Embedded Generators who are connected or in the process of connecting to the Distribution System, to execute a Connection Agreement in the applicable form as prescribed in Appendix E of the Distribution System Code and/or any 'Other Potential Contracts' as may be reasonably required by Hydro One and permitted by Appendix E of the Distribution System Code.

Connection Agreements with an Embedded Generator who is not a Wholesale Market Participant will also contain the terms under which Hydro One purchases power from that Embedded Generator ([see section 3.4.4](#) Connection Agreements).

#### H.3 Timing of Execution

Hydro One may require Customers to sign a Connection Agreement prior to, on, or after connection.

##### I. Access Agreements

Customers requiring ongoing access to Hydro One Facilities and Equipment in order to operate or maintain distribution equipment, including wholesale revenue metering, must enter into an access agreement. Details are included in Appendix A.

##### J. Special Contracts

Hydro One develops special contracts, for specific types of service including:

1. construction sites
2. mobile facilities
3. non-permanent structures
4. special occasions/events
5. house moves
6. connections requiring upstream upgrades (transmission or Host Distributor).

#### 2.1.8 Bypass of Distribution Facilities

If an existing Customer who is an Embedded Distributor or a Customer with non-coincident peak demand meeting or exceeding 5MW decides to transfer all, or a portion of, its existing load at a Hydro One-owned Distribution Facility to the Customer's own facility or to the facility of another person (including a transmitter) , thereby resulting in revenue loss to Hydro One's Distribution business, the transfer is referred to as a "bypass".

To protect other ratepayers, Hydro One shall require the Customer to compensate Hydro One for the bypass, except where:

- the Customer, to serve new load, either builds a new facility or transfers that new load to the facility of a third party,
- the Customer demonstrates to Hydro One's satisfaction through an energy study or audit, that the Customer's load reduction has resulted from embedded renewable generation, energy conservation, energy efficiency or load management activities, or
- a Distributor-owned asset has been overloaded, and a Customer transfers the overload to its own facility or to the facility of another person.

## SECTION 2 – DISTRIBUTION ACTIVITIES - GENERAL

### 2.1 Connections

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The bypass compensation amount will be calculated as follows:

$$\begin{array}{|c|} \hline \text{Total} \\ \text{Distribution} \\ \text{Bypass} \\ \text{Compensation} \\ \hline \end{array} = \begin{array}{|c|} \hline \text{Net Book Value} \\ \text{(of the Bypassed Facility)} \\ \text{Plus} \\ \text{Removal or Remediation Cost} \\ \text{Minus Salvage Value} \\ \hline \end{array} \times \begin{array}{|c|} \hline \text{Bypassed Capacity} \\ \text{Divided by} \\ \text{Maximum Supply} \\ \text{Capacity} \\ \text{of the Bypassed Asset} \\ \hline \end{array}$$

For the purposes of this calculation, the bypassed capacity on the relevant facility shall equal the difference between the Customer's existing load on that facility at the time of bypass and the highest rolling three-month average of the Customer's non-coincident peak demand in the twelve-month period following the date on which bypass occurred.

If the bypass of a Distribution Facility by the Customer also results in the bypass of a transmitter or host Distributor-owned facility, Hydro One will require from the Customer, an appropriate share of any bypass compensation payable (as an "upstream cost") to the transmitter or host Distributor. .

#### 2.1.9 Load Capacity on a Distribution Facility

This section addresses Hydro One's determination of available capacity on its Distribution Facilities and the assignment of that capacity to its Customers in the Sub-Transmission rate class, including Embedded Distributors, and General Service Customers with an average peak load greater than 500 kW. At Hydro One's discretion, this process may be applied to any General Service Customer whose average usage is 50 kW or greater.

##### A. Total Normal Supply Capacity

The Total Normal Supply Capacity of a Distribution Facility is equal to the maximum continuous amount of load the facility can supply. It is determined based on equipment electrical ratings, voltage constraints in accordance with CSA standards, and system reliability considerations (e.g. the ability to reliably discriminate between normal and faulted conditions). Hydro One identifies Distribution Facilities as either winter- or summer-critical.

##### B. Assigned Capacity

A Customer's Assigned Capacity on a Distribution Facility is equal to the Customer's Historical Capacity or Contracted Capacity, plus any Available Capacity that Hydro One assigns to the Customer on that Distribution Facility. Please refer to Part C, D and E below for information on Hydro One's process for determining Historical Capacity, Contracted Capacity and Available Capacity on a Distribution Facility.

A Customer's three-month average peak load is limited to the Customer's Assigned Capacity. Any load increase beyond this requires Hydro One's approval. Changes to a Customer's load profile that include an increase in seasonal loading compared to the Customer's historic usage also require Hydro One's prior approval. Normal load growth of Embedded Distributors is exempt from these approval requirements until the Total Normal Supply Capacity of the Distribution Facility has been reached or all Available Capacity has been assigned.

### 2.1 Connections

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#### **C. Historical Capacity**

##### **C.1 Determination**

A Customer's Historical Capacity on a Distribution Facility is equal to the Customer's highest rolling three-month average non-coincident peak load on the Distribution Facility under normal operating conditions, in the most recent three-year period. If the Customer has been connected less than three years, Hydro One will use their highest rolling three-month average non-coincident peak load on the facility during their connection period.

##### **C.2 Load Manipulation**

Where Hydro One reasonably believes that a Customer is manipulating its load for the purpose of Historical Capacity determination, Hydro One may, at its sole discretion, re-determine the Customer's Historical Capacity to eliminate the effects of such manipulation. Hydro One will notify the Customer of any adjustments made to its Historical Capacity and provide the rationale for these adjustments.

##### **C.3 Notification**

Upon written request from a Customer, Hydro One will determine the Customer's Historical Capacity on a Distribution Facility and provide it to the Customer.

#### **D. Contracted Capacity**

For the duration of the Expansion Connection Horizon a Customer shall have contracted capacity on the distribution Expansion facility equal to the Customer's load forecast provided for the Connection Horizon period that was used in the Expansion economic evaluation, unless otherwise agreed to by the Customer and Hydro One in the Customer Service Contract.

#### **E. Assignment of Available Capacity**

When existing Distribution Facilities have unused and unassigned supply capacity, Hydro One may assign the Available Capacity to a Customer that makes a written request for additional capacity. This will be known as the Customer's Assigned Capacity. Where a Distribution Facility has insufficient capacity to fully accommodate multiple requests, Hydro One will assign capacity at its discretion on a first-come, first-served basis. Hydro One will not assign capacity to a customer unless the Customer has demonstrated its need for the capacity to the satisfaction of Hydro One.

#### **F. Cancellation of Assigned Available Capacity**

In cases where Hydro One has assigned Available Capacity on a Distribution Facility to a Customer, and the Customer has not utilized that capacity within one year after the date it was assigned, Hydro One will cancel the assignment and treat such capacity as Available Capacity.

Under certain circumstances, including when a Customer is constructing a new facility that requires more than one year to come into service, Hydro One may extend the one-year period if the Customer so requests in writing.

##### **2.1.10 Cost Responsibility for Investments in Transmission Facilities**

Hydro One, as a transmission-connected customer, may be required to provide a capital contribution to a transmitter respecting a new or modified transmission connection facility for additional supply. Under the terms of Section 3.6 of the Distribution System Code, if this facility also meets the need of an Embedded Distributor and/or Distribution load Customer with a non-coincident peak demand meeting or exceeding 5 MW, Hydro One will require a capital contribution from all such beneficiaries of that investment.

### 2.1 Connections

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The beneficiaries' contributions will be based on their respective incremental capacity requirements and the total project cost. Upon receiving one or more Customer requests for connection, or upgrade, to Distribution Facilities which trigger investment in a transmission facility, Hydro One will request the transmitter which owns the facility to calculate the capital contribution for each beneficiary, including itself. This calculation will be done using the methodology and inputs described in the Transmission System Code.

For up to 15 years following the in-service date of the transmission facility, to ensure that the credit and debit balances of all beneficiaries are applied accurately and fairly, the transmitter will also perform for each original, as well as each subsequent, beneficiary, updated capital contribution calculations. These will be used to determine both potential rebates for original beneficiaries and potential contribution(s), if required, from any subsequent beneficiaries, in accordance with the Transmission System Code.

### 2.2 Disconnection/Load Control

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Hydro One reserves the right to Disconnect, or control the amount of electricity that a Customer can consume by installing a load control device, for any of the following reasons:

1. failure to pay Hydro One any amounts due and payable for the Distribution of electricity or for supply of electricity under [sections 29](#) and [31](#) of the Electricity Act;
2. failure to pay Hydro One any amounts due and payable on a distributor-consolidated bill;
3. failure to pay any Connection costs due and payable;
4. failure to notify Hydro One of Customer responsibility for electricity account when a new party moves into an existing connected property and consumes electricity;
5. non-payment of security deposits identified as a condition of service or a condition of continuing service;
6. failure to setup a new account after moving in to a vacant premises;
7. contravention of the laws of Canada or Ontario;
8. imposition of an unsafe worker situation beyond normal risks inherent in the operation of the Distribution System;
9. adverse effect on the reliability and safety of the Distribution System;
10. a decrease in the efficiency of the Distribution System;
11. an adverse effect on the quality of Distribution Services received by an existing Connection;
12. inability of Hydro One to perform meter reading (manually, automatically or remotely), planned inspections, maintenance, repairs or replacement of all or any part of a Meter Installation;
13. failure of the Customer to comply with a directive of Hydro One that Hydro One makes for the purposes of meeting its Licence obligations;
14. failure of the Customer to comply with any requirements in these Conditions of Service, including a requirement that the Customer complete an account set up process over the telephone or in writing and assume responsibility for Distribution Services charges, or a term of any agreement made between the Customer and Hydro One, including, but not limited to, a Connection Agreement, Connection Cost Agreement or a Connection and Cost Recovery Agreement;
15. failure of the Customer to enter into a Connection Agreement required by these Conditions of Service;
16. in compliance with a court order;
17. by order of the Electrical Safety Authority;
18. by order of the IESO; or
19. for the reasons identified in [section 2.2.1](#) of these Conditions of Service.

#### 2.2.1 Disconnection/Load Control Process for Reasons of Non-Payment

Hydro One may fully interrupt or control the distribution of electricity to Customers if a bill remains unpaid in whole or in part 19 calendar days after the due date and:

1. at least 60 calendar days after a written Disconnection notice has been provided to the Customer (by personal service, prepaid mail or by posting a notice on the property in a conspicuous place), if the Customer is a residential Customer who has provided Hydro One with documentation from a physician confirming that Disconnection poses a risk of significant adverse effects on the physical health of the Customer, his or her spouse, dependent family member or other person who regularly resides with the Customer; or

### 2.2 Disconnection/Load Control

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2. at least 10 calendar days after a written Disconnection notice has been provided to the Customer by personal service, prepaid mail or by posting notice on the property in a conspicuous place.

Hydro One will provide the Customer being disconnected for non-payment the Fire Safety Notice of the Office of the Fire Marshall and any other public safety notices or information bulletins issued by public safety authorities and provided to Hydro One (In accordance with [Section 4.2.1](#) of the Distribution System Code), which provide information respecting dangers associated with the disconnection of electricity service.

A residential Customer may designate a third party to also receive a copy of the notices set out in this section if the request is made no later than the last day of the applicable minimum notice period set out in this section.

If Hydro One receives notice from a registered charity, government agency or social service agency that it is assessing a residential Customer to determine if he or she is eligible for bill payment assistance or receives notice from a designated third party that he or she is attempting to arrange assistance with the bill payment, Hydro One will wait for 21 days from the time it receives such notification before disconnecting service, provided such notification is made within 10 days after the date on which the Customer receives the Disconnection notice. If the assessment determines that the Customer is not eligible to receive bill payment assistance, or the third party decides not to assist the Customer, Hydro One will proceed with the Disconnection process. Hydro One will make reasonable efforts to contact the residential Customer at least 48 hours before the scheduled date of Disconnection.

If a multi-unit, master-metered building is to be disconnected, Hydro One will post a copy of the Disconnection notice in a conspicuous place, on or in the building, promptly after issuing the notice.

#### **2.2.2 Restricted Access to Meter Located in Residential Property**

Hydro One has the right to enter a Customer's property in order to read, inspect, maintain, repair or replace the meter. Hydro One also has the right to physically Disconnect or limit the amount of electricity a Customer consumes, as noted in [section 2.2](#) of this document, if Hydro One is unable to perform meter reading (manually, automatically or remotely), planned inspections, maintenance, repairs or replacement of all or any part of a Meter Installation.

If a residential Customer restricts access to a meter located within a residential property in order to prevent Disconnection due to non-payment, Hydro One may apply to court for an order to enter the property and request a court-appointed sheriff to escort Hydro One employees onto the property. If necessary, Hydro One will also request the assistance of a bailiff and locksmith. Customers will be responsible for paying Hydro One all the costs incurred with entering the Customer's property, including court fees, sheriff's fees, and the costs of a bailiff and locksmith.

#### **2.2.3 Disconnection Process for Reasons Other than Non-Payment**

For reasons other than non-payment, Hydro One will provide Customers with a Disconnection notice by personal service, prepaid mail or by posting a notice on the property in a conspicuous place. If the Customer fails to remedy the situation described in the Disconnection notice within the time period specified, then Hydro One may either Disconnect or interrupt the service on or after the date specified in the notice.



### 2.2 Disconnection/Load Control

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#### 2.2.4 Immediate Disconnection without Notice

In the following circumstances, Hydro One may immediately interrupt a Customer's service, without notice:

- a. to comply with a court order or a request by a fire department
- b. in case of an Emergency
- c. for public safety reasons (including potential for loss of life or limb)
- d. for system reliability reasons
- e. where there is an energy diversion, fraud or abuse on the part of the Customer; or
- f. to inspect, maintain, repair, alter, remove, replace or disconnect wires or other facilities used to Distribute electricity

Inspection requirements from [section 2.1.4](#) also apply upon reconnection.

#### 2.2.5 Liability for Disconnection

If a Customer's service has been disconnected, the Customer is still responsible for any arrears or money owing for the balance of the term of the contract. Customers are also responsible for any third-party costs associated with the Disconnection, including, but not limited to, locksmith fees, court fees, bailiff and sheriff's fees. These costs will be included in the Customer's bill and will be paid by the Customer.

Under no circumstances will Hydro One be liable for any damage resulting from, associated with or related to the Disconnection or the control of distribution of electricity, including damage to the Customer or the Customer's premises and any business or other losses suffered by the Customer as a result of the disconnection.

#### 2.2.6 Reconnection

If Customers reasonably remedy the problem that caused Hydro One to disconnect service and Hydro One approves the remedy, Hydro One will reconnect service, provided that the Customer pays all costs associated with the Disconnection and reconnection (including inspection costs), prior to reconnection.

Customers must obtain the approval of the Electrical Safety Authority prior to reconnection if any of the following apply:

1. Hydro One has reason to believe the wiring may have been damaged or altered;
2. Service was disconnected in order to modify the Customer's wiring;
3. Service was disconnected for six months or longer;
4. Service was disconnected because of an adverse effect on the reliability and safety of the Distribution System; or
5. It is a requirement of the Electrical Safety Code.

#### 2.2.7 Disconnection and Reconnection Related Charges

Hydro One will charge Customers if it is necessary to travel to the Customer's premises to collect payment for an overdue account, disconnect service, reconnect service, and for any incidental charges. Hydro One also charges Customers for Disconnections and reconnections done remotely.

### 2.2 Disconnection/Load Control

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#### 2.2.8 Unauthorized Energy Use

Hydro One will disconnect service to a Customer, without notice, in cases of energy diversion, fraud or abuse or meter tampering on the part of the Customer. In these situations, Customers will be liable to pay Hydro One for all electricity that was consumed, but not metered or paid for, based solely on Hydro One's calculations. Service will not be reconnected until the condition is rectified and the Customer pays all uncollected charges, late payment charges and costs incurred by Hydro One (including inspection and repair costs, and Disconnection and reconnection costs). Hydro One may notify, as appropriate, Measurement Canada, police officials, the Electrical Safety Authority, or other regulatory and legal entities, of possible energy diversion, fraud, or abuse.

#### 2.2.9 Fraudulent Account Setup

If Hydro One has reasonable grounds to believe that a Customer (whether an occupant who owns or rents the property, where the property is used for either residential or commercial purposes) has intentionally avoided bill payment by applying or reapplying for a new Hydro One account under a different account holder name, Hydro One has the right to refuse service or Disconnect service and/or maintain a service interruption. Also, to establish a new account and begin electricity supply, Customers may be required to validate their identity (see [section 2.1.3](#)) and/or provide a letter from a lawyer affirming their identity, and that they are not affiliated to any previous account holder with stranded arrears.

#### 2.2.10 Service Cancellation

When Customers request a service cancellation, Hydro One will remove certain delivery equipment including power lines, transformers and the meter. For reconnections, Customers will follow the process for new connections (see [section 2.1](#)) and must pay for all costs to have the appropriate delivery equipment reinstalled.

**2.3 Conveyance of Electricity**

**2.3.1 Limitations on the Guarantee of Supply**

Hydro One will make reasonable efforts to provide Customers with a regular and uninterrupted supply of electricity. However, Hydro One does not guarantee a constant supply, or the maintenance of unvaried frequency or voltage, and will not be liable for damages or production losses to Customers by reason of any failure if this occurs.

Customers, including households, requiring a higher degree of security of supply than that of normal supply are responsible to provide their own backup or standby facilities and/or pay all associated incremental costs to supplement power supply in the event of power outages. Customers may also require, at their premises, special protective equipment (subject to the approval of Hydro One), to minimize the effect of momentary power interruptions.

Customers requiring a Three Phase supply must install protective apparatus to avoid damage to their equipment, which may be caused by the interruption of one phase, or non-simultaneous switching of phases of Hydro One’s supply. Damages resulting from the failure to install protective apparatus shall be at the Customer’s expense.

During an emergency, Hydro One may interrupt supply of electricity to a Customer in response to a shortage of supply, to effect repairs on the Distribution System, or while repairs are being made to Customer-owned equipment. In addition to Hydro One’s rights under Section 40 of the Electricity Act, Hydro One or its authorized agents may enter the Customer’s property in accordance with [section 1.6.2](#) of these Conditions of Service.

Where submarine cable is used, Hydro One may not be able to restore interrupted supply due to safety concerns caused by seasonal weather. Affected Customers will be notified, and power will be restored when conditions permit.

**2.3.2 Power Quality**

**A. Standards and Guidelines for Power Quality**

Hydro One will follow Good Utility Practice in determining its guidelines and standards for power quality. Hydro One does not guarantee an unvaried voltage or frequency.

**B. Voltage and Current Harmonics**

Large rectifiers, inverters, arc furnaces, static VAR systems and other non-linear loads generate harmonic voltages and currents that can interfere with the operation of the Distribution System by conductive interference and/or may interfere with communication systems by inductive interference.

Hydro One will follow Good Utility Practice for establishing limits on harmonic current emissions and voltage distortions. Customers will ensure that their equipment does not generate harmonic currents that exceed acceptable industry practices.

**C. Voltage Flicker**

Voltage flicker will be limited to:

| Magnitude (%) | Limit         |
|---------------|---------------|
| 0.5           | 3 per second  |
| 1.0           | 20 per minute |
| 2.0           | 45 per hour   |
| 3.0           | 4 per day     |

A higher flicker may be acceptable for infrequent starts.

## SECTION 2 – DISTRIBUTION ACTIVITIES - GENERAL

### 2.3 Conveyance of Electricity

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#### D. Frequency Fluctuations

In general, the frequency of AC power on the Distribution System is dictated by the supply frequency on the transmission system to which the Distribution System is connected.

#### E. Over-voltages

In general, Hydro One will follow Good Utility Practice to minimize the magnitude and extent of short-term over-voltages.

#### Voltage Unbalance

The Distribution System may be subject to differences in voltage across the three phases of supply due to unbalanced Customer loads or unbalanced loading of the distribution circuits by Single Phase Customer loads. Since unbalances in voltage supply can affect the performance of Three Phase electrical equipment, Hydro One will try to minimize voltage unbalance, applying the following guidelines:

| Measured Voltage Unbalance | Corrective Action to Be Taken                 |
|----------------------------|---|
| < 3 %                      | No Action                                     |
| 3 % - 5 %                  | Correct on a planned basis (within 12 months) |
| > 5 %                      | Correct on an Emergency basis                 |

#### F. Motors and Welders

The maximum acceptable rating for a motor, or combination of motors, that may be started simultaneously at full voltage across the line is:

| Voltage Level | Maximum Rating |
|---------------|----------------|
| 120 V         | 2 HP           |
| 240 V         | 4 HP           |
| 120/208 V     | 6 HP           |
| 347/600 V     | 8 HP           |

If the simultaneous motor load is more than allowable for simultaneous starting at full voltage across the line, Customers must use reduced-voltage starters that have been approved by Hydro One.

Motors and welders in excess of the following thresholds are subject to approval by Hydro One:

- Welder size exceeds 30 kVA
- Motor size exceeds the following levels:

| Voltage Level    | 1-phase motor | 3-phase motor |
|------------------|---------------|---------------|
| 16/27.6 kV       | >20 HP        | >100 HP       |
| Below 16/27.6 kV | >10 HP        | >25 HP        |

### 2.3 Conveyance of Electricity

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#### G. Stray, Tingle, or Animal Contact Voltage

From the normal delivery and use of electricity, a small voltage may exist between two conductive surfaces that can be simultaneously contacted by an animal. Examples of the conductive surfaces include concrete floors, metal stabling, milk pipelines, water bowls, etc. This voltage, known as, "animal contact voltage," "stray voltage" or "tingle voltage," usually presents no harm. However, if the voltage level is high enough, it may affect livestock behaviour and health.

Using dairy cows as an example, reported symptoms include:

- Reluctance to enter milking parlour
- Reduced water or feed intake
- Nervous or aggressive behaviour
- Uneven and incomplete milkout
- Increased somatic cell count
- Lowered milk production

These same symptoms can also be the result of other non-electrical farm factors for example, disease, poor nutrition, unsanitary conditions, or milking machine problems. Farmers should investigate all possibilities, including stray voltage, when attempting to resolve these symptoms.

Hydro One has formed a Farm Rapid Response Team to identify, assess and mitigate stray voltage on farms. Customers who think they may be experiencing a stray voltage problem can call Hydro One's Farm Rapid Response Team at 1-888-405-3778 or by email at FarmResponse@HydroOne.com to initiate an investigation. Hydro One staff will visit the Customer's farm to perform appropriate measurements as noted in the Distribution System Code section 4.7 and Appendix H. Customers will need to complete a Stray Voltage Investigation Form, which can be found on [www.HydroOne.com](http://www.HydroOne.com), and provide it to Hydro One before the site visit.

Additional information on Hydro One's Farm Rapid Response Team process can be found at [www.HydroOne.com](http://www.HydroOne.com).

#### H. Power Quality Inquiries

Hydro One maintains a 24-hour call answer service (see [section 1.5](#)) to answer Customers' questions about power interruptions, power quality and incidents related to the integrity or safety of its Distribution System.

In response to a power quality concern, where the utilization of electric power affects the performance of electrical equipment, Hydro One will work with the Customer to perform investigative analysis to identify the underlying cause. Depending on the circumstances, this may include review of relevant power interruption data, trend analysis, and/or use of diagnostic measurement tools.

If, after an initial investigation, the power quality issue remains unresolved, and it is determined that further detailed engineering study is required, Hydro One will inform the Customer of an intended course of action. Upon determination of the cause resulting in the power quality concern, where it is deemed a system delivery issue and where industry standards are not met, Hydro One will recommend and/or take appropriate mitigation measures. Hydro One will not be obligated to correct a problem if correcting the problem would adversely affect other Hydro One Customers. Hydro One will use appropriate industry standards and Good Utility Practice as a guideline.

### 2.3 Conveyance of Electricity

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If Hydro One determines that the source of the problem is with the Customer's own equipment, Hydro One may require reimbursement from the Customer for all, or a portion, of the costs incurred in carrying out its investigation.

**For more information on Hydro One's Power Quality Reporting Process, go to [www.HydroOne.com](http://www.HydroOne.com) and search for "power quality"**

#### I. Customer Notification of Planned Outages

Occasionally, Hydro One may need to interrupt a Customer's electrical supply in order to maintain and/or improve the reliability of the Distribution System. For planned power outages, Hydro One notifies Customers in advance by telephone, email, text message, hand-delivered notifications, media alerts or the Hydro One 'Power Outage Map' app.

Prior notification does not apply in Emergency situations.

##### I.1 Vital Services

Customers who rely on electricity for life support equipment should contact our Customer Contact Centre to request that their account be added to our Vital Services list. This list identifies customers who have a life threatening medical need and would be medically affected by a power outage.

Customers must provide medical condition information and consent along with a doctor's certificate. Customers are responsible for ensuring that the information they provide is accurate and up-to-date. Hydro One will conduct an audit of customers on Life Support systems once every three years to ensure that the information on record is accurate and that the service is still required.

Hydro One will attempt to contact critical customers in the event of a planned outage as per section H above or an unplanned service interruption. However, critical customers are encouraged to have a back-up power generation source for these purposes or be able to make alternate arrangements in the event of a power interruption. Hydro One will not be liable in any manner to the Customer for failure to notify in accordance with section H or section H.1 above.

### 2.3 Conveyance of Electricity

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#### 2.3.3 Electrical Disturbances

##### Customer Responsibilities

As noted above, Customers must ensure their electrical equipment does not cause unacceptable voltage fluctuations, voltage unbalance, harmonics or other disturbances that could negatively affect other Customers connected to the Distribution System, or Hydro One Facilities and Equipment. Customers should contact Hydro One if they are planning to install such equipment including large motors, welders and/or variable speed drives.

Customers must ensure their equipment is in compliance with the Canadian Standards Association (CSA) standard CAN/CSA C61000-3-6. Specific electrical disturbances should be referred to Hydro One for evaluation against Hydro One power quality standards and guidelines (see [section 2.3.2](#)).

The Customer must resolve any unacceptable electrical disturbances caused by its Customer Equipment. Hydro One may require the Customer Equipment to be disconnected from the Distribution System (see [section 2.2](#)) if the equipment issues are not corrected.

**Power Factor:** Customers must take and use power at all times in such manner that the ratio of the kW to the kVA, when measured simultaneously at the point of delivery for power, is as near unity as practicable. Hydro One may require a Customer to operate at or above the specified power factor limit or be responsible for the costs that Hydro One incurs in meeting the required limit at the station when the IESO has issued directives that require adherence to a specific PF limit, such as .95 PF at a transformer station.

**Phase Balancing:** Customers must take and use power so the current is taken from the Three Phases equally as much as possible. If at any time the unbalance in current is greater than 10% or in Hydro One's opinion excessive, the Customer must make at its own expense, upon request, the changes necessary to reduce the unbalance to an acceptable value.

**Electrical Fluctuations and Interference:** Customers must not cause disturbance, fluctuation or interference on Hydro One's Distribution System or with its communication systems or control circuits, or with those of any other third party. Customers must install, at their expense, suitable apparatus or otherwise to reduce any disturbance, fluctuations or interference to a tolerable level. In any event, the Customer shall indemnify Hydro One from all claims and demands made against Hydro One by any third party in consequence of failure by the Customer to perform its obligations under this paragraph.

Customers requiring an uninterrupted source of electricity supply or a supply completely free from fluctuations and disturbances must provide their own power conditioning equipment.

### 2.3 Conveyance of Electricity

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#### 2.3.4 Standard Voltage Offerings

Hydro One will supply a single stage of transformation to the Customer's Utilization Voltage at standard voltages only. These voltages will conform to CSA standards. If required, the Customer will supply any additional transformation required below the Utilization Voltage. If a secondary voltage other than those noted below is required, the Customer will supply the transformers and associated equipment.

#### A. Standard Secondary Voltages

Single Phase – 120/240 V 3 wire;  
Three Phase – 120/208 V 4 wire; and  
Three Phase – 347/600 V 4 wire.

#### B. Standard Primary Voltages

Hydro One has a variety of primary distribution voltages across the province, but in general has only one primary voltage in a given location. To service a connection or development, Hydro One provides the nominal primary voltage present in the vicinity, unless the development cannot be effectively fed from the existing supply. Customers requesting a Primary Service must contact Hydro One to determine the primary voltage available at their location.

#### Typical Primary Voltages

44,000 Volts – Three Phase three-wire  
16,000/27,600 Volts – Three Phase four-wire  
14,400/25,000 Volts – Three Phase four-wire  
8,000/13,800 Volts – Three Phase four-wire  
7,200/12,470 Volts – Three Phase four-wire  
4,800/8,320 Volts – Three Phase four-wire  
2,400/4,160 Volts – Three Phase four-wire

#### Voltage Conversions

When Hydro One undertakes a voltage conversion to accommodate normal load growth, the following terms apply:

1. Where private service lines must be upgraded, Hydro One will pay all labour costs (not to exceed its own estimated labour costs) and equipment costs (such as poles, insulators, cross arms, cut-outs, arresters and transformers and under ground cables when required) associated with the upgrade.
2. Hydro One will pay to convert obsolete delta services to wye-grounded.
3. Hydro One will pay for the electrical inspection.
4. In some cases a more cost-effective solution may be to install a step up/down voltage transformation device.



## 2.3 Conveyance of Electricity

### 2.3.5 Voltage Guidelines

Standard operating conditions are:

| <b>CSA Standard CAN3-235-83 Table 3</b> |   |                             |         |                              |
|---|---|-----------------------------|---------|------------------------------|
| Nominal System Voltages                 | Recommended Voltage Variation Limits for Circuits up to 1000 volts, at the service entrance |                             |         |                              |
|   | Extreme Operating Conditions  | Normal Operating Conditions |         | Extreme Operating Conditions |
| Single Phase                            |   |                             |         |                              |
| 120/240                                 | 106/212   | 110/220                     | 125/250 | 127/254                      |
| 240                                     | 212   | 220                         | 250     | 254                          |
| 480                                     | 424   | 440                         | 500     | 508                          |
| 600                                     | 530   | 550                         | 625     | 635                          |
| Three Phase 4-Wire                      |   |                             |         |                              |
| 120/208Y                                | 110/190   | 112/194                     | 125/216 | 127/220                      |
| 240/416Y                                | 220/380   | 224/388                     | 250/432 | 254/440                      |
| 277/480Y                                | 245/424   | 254/440                     | 288/500 | 293/508                      |
| 346/600Y                                | 306/530   | 318/550                     | 360/625 | 367/635                      |
| Three Phase 3-Wire                      |   |                             |         |                              |
| 240                                     | 212   | 220                         | 250     | 254                          |
| 480                                     | 424   | 440                         | 500     | 508                          |
| 600                                     | 530   | 550                         | 625     | 635                          |

These voltage guidelines relate to long-term steady-state levels and do not include short-term or transient disturbances.

For system voltages greater than 1,000 V, and up to 50,000 V, the maximum voltage variation is  $\pm 6\%$  of the nominal voltage. In Emergency conditions, voltages may drop below these thresholds.

Where voltages lie outside the indicated limits for normal operating conditions, but within the indicated limits for extreme operating conditions, improvement or corrective action will be taken on a planned and programmed basis, but not necessarily on an Emergency basis.

Where voltages lie outside the indicated limits for extreme operating conditions, improvement or corrective action will be taken on an Emergency basis. The urgency for such action will depend on many factors, such as the location and nature of load or circuit involved, and the extent to which limits are exceeded with respect to voltage levels and duration, etc.

Hydro One uses reasonable diligence to maintain supply voltage levels but is not responsible for variations in voltage from external forces including operating contingencies, exceptionally high loads and low voltage supply from the transmitter.

### 2.3.6 Emergency Backup Generation Facilities, Load Displacement Generation Facilities and Energy Storage

#### A. Emergency Backup Generation Facilities

Emergency Backup Generation Facilities must be operated to supply Customer load only when the Hydro One supply is unavailable.

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Customers with Emergency Backup Generation Facilities (portable or permanently affixed) must comply with the Technical Interconnection Requirements. If a 'make-before-break' switching transition is employed, the Customer must ensure that the facility never remains connected to the Distribution System for more than 6 cycles. Customers are also responsible for complying with all applicable criteria in the Electrical Safety Code, as well as, all Applicable Laws and environmental requirements related to Emergency Backup Generation Facilities.

Customers must notify Hydro One if they operate permanently affixed Emergency Backup Generation Facilities.

Note that sections 3.4.4, 3.4.7, 3.4.8, and 3.4.9 also apply to Emergency Backup Generation Facilities.

#### **B. Load Displacement Generation and Energy Storage Facilities**

Customers planning to install a Load Displacement Generation Facility and/or Energy Storage Facility are required to consult with Hydro One during the planning process and prior to installation. Hydro One will assess the proposed facility to determine the feasibility of Connection, and identify any system and capacity constraints and/or connection requirements. Hydro One may charge the Customer for this assessment. The Customer is responsible for paying all costs associated with the Connection of their facility, including any upstream work, any upgrades required to the Distribution System and bringing the Customer's existing load meter into compliance with Hydro One's power quality monitoring requirements and any other Hydro One requirements.

It is the Customer's responsibility to ensure that:

1. the Load Displacement Generation Facility and/or Energy Storage Facility is installed and operated in a manner that does not adversely affect the Distribution System
2. the Load Displacement Generation Facility and/or Energy Storage Facility meets the design and operating technical requirements specified in [Appendix F.2](#) of the Distribution System Code, the requirements of the Electrical Safety Code and the Technical Interconnection Requirements
3. the generation output from the Load Displacement Generation Facility does not back feed into the Distribution System.

Gross Load Billing (GLB) applies to Load Displacement Generation Facilities operated in parallel with or in isolation from the Hydro One Distribution System, if they meet the criteria outlined in [section 2.4.5](#). Gross Load Billing Customers (as defined in [section 2.4.5](#)) with a rated capacity less than 20 MW must have a retail point-to-point meter installed at the generator terminal. Hydro One will provide the meter as well as the telecommunication connection. Where possible, Hydro One will own and maintain the meter and will add an additional meter charge to the Sub-Transmission settlement. If the meter requires a dedicated phone line for communication purposes, Hydro One will pay the monthly communication bill. (For information about metering installation costs and specific requirements, see [section 2.3.7](#).)

Load Displacement Generation and/or Energy Storage Customers are required to provide an interface protection for their Load Displacement Generation Facility and/or Energy Storage Facility that is capable of detecting all applicable faults on the Hydro One Distribution System and disconnecting the Load Displacement Generation Facility and/or Energy Storage Facility from the Distribution System. Load Displacement Generation and/or Energy Storage Customers are also required to provide, install and maintain a disconnecting device at the Point of Common Coupling with the Distribution System, or some other location acceptable by Hydro One, for the purpose of

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isolating the Load Displacement Generation Facility and/or Energy Storage Facility in case of an Emergency and for work protection. The disconnecting device must comply with the technical requirements specified in [Appendix F.2](#) of the Distribution System Code, the Technical Interconnection Requirements (including updates received from Hydro One), and the Electrical Safety Code.

Proposed Load Displacement Generation Facilities and/or Energy Storage Facilities with generation units having a nameplate-rated capacity greater than 10 kW must pass a series of commissioning tests before the unit(s) is declared available for service. Hydro One will provide the Customer with a list of testing requirements. The requirements will be based on a number of factors, including size and type of generator units and/or storage units and type of Connection. The Customer must confirm it has completed the commissioning testing through the Confirmation of Verification Evidence Report (COVER) process. The Customer must pay all costs associated with commissioning.

Load Displacement and/or Energy Storage Customers will provide Hydro One with all information requested and specified in the Technical Interconnection Requirements (including updates received from Hydro One).

Note that sections 3.4.4, 3.4.5, 3.4.6, 3.4.7, 3.4.8 and 3.4.9 also apply to Load Displacement Generation Facilities and/or Energy Storage Facilities.

#### 2.3.7 Meter Installation and Meter Reading

##### 2.3.7.1 General

For Retail settlement and billing purposes, Hydro One will provide, install, own and maintain Meter Installations for all Customers except for those who are Wholesale Market Participants or Embedded Generators. Wholesale Market Participants must provide metering facilities in compliance with the IESO's Market Rules.

The type of meter will be based on the Customer's Rate class, energy consumption and peak load. The security and accuracy of metering will be maintained under regulations and standards established by Measurement Canada and Hydro One.

When a Customer's power factor is known to be less than 90 per cent, a kVA meter, or other equivalent electronic meter, will be used for measuring and billing.

To facilitate remote meter consumption data retrieval, Meter Installations may include telecommunications equipment that complies with applicable regulations and directions from the Smart Meter Entity. Hydro One, or its authorized agents, will select the form and location of telecommunications equipment. All such equipment will be operated at Hydro One's cost.

At Hydro One's discretion, Customers will allow Hydro One to connect a revenue Interval Meter through the Customer's phone line for remote interrogation and data transfer. Hydro One will ensure that there are no material adverse impacts of the revenue meter connection on the Customer's use of the phone line.

As noted above, Meter Installations are owned and maintained by Hydro One and ends at the meter base. Customers are responsible for maintaining the meter base.

Where a Customer has a Combination Meter/Breaker Unit (meter box and breaker), Hydro One is responsible for the meter (meter/adaptor) only. In all cases, (regardless of any labels, stickers or nameplates identifying otherwise) the Customer owns and is responsible for repairs and maintenance of the meter base, meter box and breaker.

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Hydro One will not install or reinstall Customer or third-party-owned equipment on Hydro One metering, and is not responsible for any damage to such equipment, during the installation, inspection, reading, calibration, maintaining, repair, alteration, removal, or replacement of all or any part of a Meter Installation. The Customer shall ensure the compatibility of Customer or third-party-owned equipment with Hydro One metering.

#### A. Location of Meter Installations

Meter Installations must be located on the exterior of the building (as determined by layout and/or subdivision design drawings) and are subject to approval by Hydro One, based on standards established by the Electrical Safety Code and the Ontario Building Code. They may be located:

1. on the driveway side of the building near the front, facing the street or roadway
2. no more than three metres from the front, facing the street or roadway
3. on the wall of the building so that the midpoint of the meter after installation is 1.75 metres (plus or minus 100 mm) from finished grade, or, where this is not possible, on poles or on a separate support
4. in dedicated metering rooms for large General Service rate class Customers, provided that guaranteed continuous access, by key or other appropriate means, is provided to Hydro One or its authorized agent.

If the Meter Installations are located on poles on the Customer's property, the Customer must install, own and maintain the poles.

Some components of a Meter Installation may be in more than one location.

#### B. Secondary Metered

Customers with average monthly peak demand of less than 50 kW are metered and billed based on energy kWh only.

Customers with an average monthly peak demand equal to or greater than 50 kW are metered and billed based on monthly peak demand (kW and kVA), as well as energy (kWh), except those in Residential Rate classifications who are metered for energy only.

New Customers with Secondary Metered Service will be metered based on forecasted load and demand.

Existing Customers with Secondary Metered Service are metered based on the results of Hydro One's annual monitoring of electricity usage (see [section 2.4.4 K](#)).

#### C. Primary Metered

Secondary metering is Hydro One's preferred metering arrangement. However, at Hydro One's discretion, a Customer's service may be metered at the primary voltage level. Where a Primary Metered Service is used, the Customer must install, own and maintain, at their expense, the entire Distribution System required downstream from the metering point, including conductors, poles, and transformation.

Where overhead primary metering equipment is used, a 30 metre minimum distance is required between the line-side service disconnect(s) and the primary metering equipment

For Customers with non-standard secondary voltages, Hydro One may install primary metering, in which case the Customer is responsible for the incremental cost of primary metering over the cost of standard secondary metering.

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Where Customer loading is minimal such that primary metering is impractical, Hydro One will only meter at a standard secondary voltage. In these cases, Customers requiring non-standard voltages are responsible for transformation beyond the secondary metering to their desired utilization voltage.

#### **D. Secondary Metering – Neutral Ground Resistor**

Customers wishing to install or remove Neutral Ground Resistors on the secondary side of the service transformer must obtain permission from Hydro One before proceeding, including obtaining approval for the metering configuration. Customers will cover all costs associated with ensuring that the metering complies with Hydro One standards.

#### **E. Totalized Metering**

For Customers who wish to consolidate/totalize two or more delivery points, Hydro One will review the request, and at its discretion may allow the individual delivery points to be billed at the aggregate level for the load facility with consideration of the following conditions:

1. Totalizing will be accomplished by either primary or secondary interval metering;
2. If the Rate classification is Sub-Transmission, all points of delivery must be supplied by the same Hydro One station;
3. If the Rate classification is General Service, the points of delivery must be located on the same or contiguous properties, must be supplied by the same Hydro One feeder and all line transformers associated with the points of delivery must have the same owner (Hydro One or Customer owned);
4. The points of delivery must all be on the same electricity pricing structure

#### **F. Central Metering**

Hydro One, at its discretion, will consider requests from Single Phase Customers to provide a central metering service for two or more buildings. For this service, Customers will:

1. pay the difference in material cost between central metering and the meter that Hydro One would have provided to the Customer in accordance with the Standard Supply Service Code;
2. where applicable, pay for labour costs associated with the conversion of an existing service to central metering;
3. comply with the Electrical Safety Code and Hydro One's Distribution Standards; and
4. supply and install, at its own expense, all conductor, poles and un derground conductor, as required, on its Private Property.

Hydro One will connect no more than four services at the central metering point. Any additional services must be connected downstream of the central metering point.

Costs for central metering apply as follows:

1. to convert an existing service under 45 kW, Customers will pay labour and incremental material costs;
2. to convert an existing service over 45 kW, Customers will pay labour costs only;
3. for new service under 45 kW, Customers will pay for incremental material costs;
4. for new service over 45 kW, Customers are not required to pay for labour or material.

### 2.3 Conveyance of Electricity

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#### G. Metering Pulses

For metering pulses or signals for load management purposes, Customers have two options:

1. The Customer provides instrument transformers and signal control equipment in a separate cabinet on the load side of Hydro One's Meter Installation; or
2. The Customer asks Hydro One to supply the pulses or signals, and pay all costs. The control for pulse or signal will be brought to a Hydro One terminal block remote from the revenue meter. Customers will not have access to Hydro One's Meter Installation (Customers are not permitted to connect to Hydro One's instrument transformers.)

#### H. Multiple Residential Properties

If the owner of an existing bulk-metered Multi-Residential Property chooses to convert to individually-metered dwelling units, the owner is responsible for the conversion costs. In such cases, all common facilities (including elevators, hall lights, exterior lighting, laundry equipment, central electric water heating, etc.) are combined on a separate service and billed at the General Service Rate with demand metering as appropriate.

##### 2.3.7.2 Instrument Transformer Enclosure

Customers are responsible for supplying, owning and maintaining meter bases (except for Three Phase services with Complex Metering Installations where Hydro One requires and supplies, at no charge, a "P" base enclosure).

For services requiring additional metering components such as instrument transformers, Customers will supply and install the following, all of which are subject to approval by the Electrical Safety Authority and Hydro One:

1. instrument transformer enclosures with minimum dimensions as required by Hydro One (see [section 3.2.4](#));
2. all required conduit, as specified by Hydro One; and
3. where acceptable to Hydro One, a combination meter socket and metering transformer enclosure (see [section 3.2.4](#))

The instrument transformer enclosure will be installed in accordance with [section 3.2.4](#) of this document at a height of no less than 90 cm and maximum 100 cm from finish grade.

##### 2.3.7.3 Interval Metering

#### A. Conditions for Supplying Interval Metering

Hydro One may provide and install an Interval Meter for any existing Customer with an Energy Only Meter and that must be billed on demand (see [section 2.4.4 K](#)).

Hydro One will install an Interval Meter on any new installation that Hydro One forecasts to have an average monthly peak demand greater than or equal to 50 kW.

### 2.3 Conveyance of Electricity

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#### B. Interval Metering Data

Hydro One requires interval metering data to settle Customers' electricity bills. Hydro One maintains the usage profile for all Customers with Interval Meters, and this information is available to Customers.

Customers can obtain access to their Interval Meter data:

1. directly using Customer purchased software. (Hydro One will provide the information required to access and use the meter data, provided that the Customer has signed the 'Read Only Access Agreement'. See Appendix A.);
2. online via Hydro One's interval meter data portal.

Customers requiring real-time information from an Interval Meter must install and maintain a telecommunications line, at their expense.

#### C. Metering

Some of our meters have Remote Disconnect and Reconnect Meter capabilities. Where technological, geographic or economic limitations preclude the establishment of a reliable communication network, Hydro One has a regulatory exemption from deployment and is not required to provide Customers with Meters capable of recording hourly interval data required for Time-of-Use rates. If Customers require access to real-time and invalidated data from a Meter, Hydro One will provide them with access, at Customers' expense, if such access does not interfere with Hydro One's access to the meter data and other conditions listed in the Retail Settlement Code.

Customers eligible for Regulated Price Plan pricing who choose to switch from Time-of-Use pricing to SPOT pricing must have an Interval Meter and are responsible for all associated and incremental Meter Installation costs (refer to Distribution System Code, [Section 5.1.5](#)).

##### 2.3.7.4 Meter Reading

If unable to access a Customer's premises, Hydro One will attempt to arrange a time that is convenient for both Hydro One and the Customer. At its discretion, Hydro One may require the Customer to read the meter and provide the results.

If the Customer does not accommodate Hydro One's request for meter reading or access, Hydro One will remind the Customer in writing of its obligation to arrange appropriate access for Hydro One to the meters, or provide Hydro One with the required meter readings.

Hydro One collects consumption data manually, automatically or remotely. Meters are read on an hourly, monthly, quarterly or annual basis, depending on Rate classification and service size. To ensure accurate billing and proper operation, it is necessary for Hydro One to read, and visually inspect, meters at least annually.

When actual readings are not scheduled or available, Hydro One reserves the right to use an estimated meter read for both energy consumption and demand data.

If Hydro One cannot access the Meter Installation after the Customer has been contacted directly, Hydro One reserves the right to require a relocation of the Meter Installation at the Customer's expense. If the situation cannot be rectified, Hydro One may Disconnect the Customer in accordance with [section 2.2](#) of these Conditions of Service.

### 2.3 Conveyance of Electricity

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#### 2.3.7.5 Final Meter Reading

When a final meter reading is required for billing purposes, the Customer will provide Hydro One with at least five business days' notice of the date upon which billing is to be discontinued. This allows Hydro One to obtain a final meter reading as close as possible to the required date. The Customer will provide Hydro One with access in order to read the meter; however, if access cannot be obtained, the Customer will pay an amount based on estimated electrical demand and/or the electrical energy used since the last meter reading.

#### 2.3.7.6 Faulty Registration of Meters

Hydro One's revenue meters comply with the accuracy specifications established by the federal Electricity and Gas Inspection Act and associated regulations, under the jurisdiction of Measurement Canada.

As billing entities, Hydro One and Retailers are responsible for informing Customers of any meter error of which they become aware of the magnitude of the error and the Customer's rights and obligations under the Electricity and Gas Inspection Act. The billing entity is also responsible for settling any payment differences with the Customer or Retailer.

In the event of incorrect electricity usage registration, the billing entity will rectify billing errors in the manner set out in [section 2.4.4](#) of this document.

#### 2.3.7.7 Meter Dispute Testing

Where the condition or registration of a meter is a matter of dispute between Hydro One and a Customer, Measurement Canada has jurisdiction, under the Electricity and Gas Inspection Act. Hydro One will inform Customers of the assistance provided by Measurement Canada in dispute investigations.

Meter dispute testing is typically the last step in a multi-stage process between the Customer and Hydro One. The process typically begins with a Customer high bill inquiry, the object of which is to validate that the bill calculations, charges and bill determinants are accurate. The process may include any or all of the following steps: collection of problem details from the Customer; analysis of billing details including calculation of charges and appropriateness of meter readings; comparison of estimated readings with past usage; obtaining a check meter reading; provision of information to assist the Customer understanding of and confidence in the bills; and field visit to the Customer premises to verify meter reading, meter data and test meter operation.

If Hydro One has reason to question a meter's operation, a meter dispute test will be initiated. However, if Hydro One is satisfied with a meter's operation and with billing accuracy, and the Customer is not satisfied, the Customer will be referred to Measurement Canada.

If the Customer or Retailer requests the services of Measurement Canada to resolve a dispute, Hydro One may charge the Customer for the costs of processing the application to Measurement Canada, and for removing and transporting the meter to a testing location. If Measurement Canada substantiates the dispute, and it is in the favour of the Customer, Hydro One will bear the costs.

Measurement Canada will follow its dispute investigation process and issue a decision. Measurement Canada has an appeal process, and Hydro One and its Customers have the option to appeal the decision and follow this process.



### 2.4 Tariffs and Charges

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#### 2.4.1 Service Connection

##### 2.4.1.1 Rate Classifications

When assigning Rate classifications, Hydro One considers the nature and use of Customers' electricity service, as well as the number of other Customers connected to the Distribution line. Distribution Services Rates for each class are based on the cost of delivering electricity to that class of Customer and meeting their electricity supply needs.

The main Rate classifications are: Year-round Residential, Seasonal Residential, General Service, Lighting (Street Light and Sentinel), Unmetered, Sub-Transmission, MicroFIT Generator and Distributed Generation.

Rates charged for Distribution Services for each classification (including miscellaneous Distribution charges not recovered through Distribution Service Rates and pass-through charges) are subject to OEB approval. Hydro One is required to pass through OEB-approved charges for wholesale market services, retail transmission services, Standard Supply Service, and Rural and Remote Electricity Rate Protection.

##### 2.4.1.2 Components of Distribution Rates

Hydro One's Distribution Service Rates include a monthly service charge component and a volume-based component.

For Demand Billed Customers, the volume Rate is a per kW charge. Demand is calculated as 90 per cent of the kVA, or 100 per cent of the measured demand in kW, whichever is greater. For Energy Only Customers, the volume Rate is a per kWh charge.

The monthly service charge is designed to recover some common costs of Distribution Services that are independent of electricity use. All other Distribution Services costs are recovered through the volume Rate.

##### 2.4.1.3 Rural and Remote Electricity Rate Protection and Debt Retirement Charge

Hydro One is required to collect Rural and Remote Electricity Rate Protection (RRRP) in accordance with the regulations made pursuant to [Section 79](#) of the Electricity Act. Debt Retirement charges are set in accordance with [Section 85](#) of the Electricity Act.

##### 2.4.1.4 Rate Schedules and Notice of Rate Changes

OEB-approved Rates and charges for Distribution Services are as set out in Hydro One's Rate schedules (see [www.HydroOne.com](http://www.HydroOne.com)). Notice of Rate changes may be published in major local newspapers and are mailed to all Customers with the first bills issued using the revised Rates.

#### 2.4.2 Energy (Electricity) Supply

##### A. Standard Supply Service

Hydro One provides Customers connected to the Distribution System with access to electricity through Standard Supply Service. All Customers are considered Standard Supply Service Customers unless they inform Hydro One otherwise and a transfer to a competitive Retailer is completed (see Retail Settlement Code, [Chapter 10](#)).

Hydro One may, at its discretion, refuse to process a Service Transfer Request if a Customer in arrears to Hydro One for Distribution Services and/or Standard Supply Service.

When a Customer makes a Service Transfer Request, Hydro One issues a 'switch' bill. This bill is based on an actual meter read unless the Customer, Hydro One and the Retailer agree in writing to an alternative. The effective date of the service transfer will be the next scheduled meter reading

### 2.4 Tariffs and Charges

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date, unless a request is made for a special meter reading, and Hydro One can accommodate the request. The OEB-approved special meter read charge applies.

All service transfers, except a return to Standard Supply Service, must be made in writing and be authorized by the Customer, with a copy retained by the Retailer.

#### **B. Pricing of Standard Supply Service, including Regulated Price Plan (RPP)**

Pricing of Standard Supply Service has been established in accordance with all applicable regulations made under the Ontario Energy Board Act and the Standard Supply Service Code. Pricing of Standard Supply Service is dependent on electricity usage and meter type, as follows:

1. Customers who are eligible for RPP shall be charged for Standard Supply Service at Rates determined, approved or fixed by the OEB in accordance with the following:
  - i. Customers will be charged OEB approved tiered prices under RPP if they have a conventional meter, or a Meter that is not registered with the Meter Data Management and Repository (MDM/R) or is located in an area where meter or network communication performance does not allow for the customer to regularly receive bills based on actual consumption.
  - ii. Customers with a Meter that is registered with the MDM/R for Time-of-Use pricing will be charged OEB approved Time-of-Use prices under RPP.
2. Customers not eligible for RPP, and with conventional meters will be billed for hourly electrical energy consumed based on the weighted average hourly SPOT market price (WAHSP) for electricity for the period over which the customer is being billed. The WAHSP will be calculated according to the methodology prescribed in the Retail Settlement Code.
3. Customers with Interval Meters are charged the Hourly Ontario Electricity Price (HOEP) applicable to the times when electricity is used, unless
  - i. They are eligible for RPP two-tier pricing, according to the Ontario Energy Board Act and the Standard Supply Services Code, and
  - ii. the eligible Customer has elected to be charged RPP two-tier pricing.
4. The default commodity billing for street lighting loads will be weighted average hourly SPOT market price, but according to the OEB-approved streetlight-specific load profile, rather than the Hydro One Net System Load Shape.

All rates are approved or fixed by the Ontario Energy Board.

The kilowatt threshold for eligible low-volume non-residential Customers is 50 kW or less, or less than 250,000 kWh, per year. Hydro One considers Customers to be 'electing SPOT Consumers' only after receiving written notification from the Customer, and where the Customer has an Interval Meter (or another eligible time-of-use metering device capable of providing data on at least an hourly basis).

Hydro One will issue an RPP variance settlement amount when:

- advised by the Customer of a move out of Ontario;
- notified in writing that the Customer will buy electricity from a retailer;
- advised by the Customer of electing to switch to SPOT pricing; or
- the Customer ceases to be eligible for RPP.

The variance amount is either a charge or a credit, and is calculated using a methodology established by the Ontario Energy Board.

Eligible RPP and SPOT Customers who wish to switch from RPP to SPOT, or from SPOT to RPP, may do so only once per calendar year.

### 2.4 Tariffs and Charges

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#### C. Competitive Retailer Supplied Electricity

Hydro One does not provide Standard Supply Service to Customers with retail contracts for electricity supply. Hydro One will continue to provide Distribution Services to such Customers; however, Customers are billed either by Hydro One (under Distributor Consolidated Billing) or by the Customer's designated Retailer (under Retailer Consolidated Billing). For more information, refer to the Retail Settlement Code.

#### 2.4.3 Deposits

In this section:

1. Residential Customers include Year-round Residential, Seasonal Residential, and bulk-metered residential condominiums.
2. non-residential Customers include farms with no principal residence, General Service, Sub-Transmission, Unmetered Loads and lighting (street and sentinel).

#### A. Requirements for Security Deposit

A security deposit is not required for Residential Customers. Hydro One may require a security deposit from non-residential Customers unless the Customer has a good payment history, as noted below, for the most recent 12 month period.

Good payment history means:

1. Customers have not received more than one Disconnection notice from Hydro One
2. Customers have not had more than one cheque or pre-authorized payment returned for insufficient funds
3. A Disconnect/Collect Trip has not occurred.

If any of the preceding events occur due to an error by Hydro One, the Customer's good payment history will not be affected.

Hydro One may require security deposits when the Customer initially applies for service, or subsequently, if a Customer fails to maintain a good payment history. The security deposit amount will be applied to the Customer's electricity account and appears as a charge on the next electricity bill issued.

Hydro One will not apply security deposits to active account arrears and will not consider them payment toward an outstanding balance, in whole or part. If Hydro One holds a cash security deposit when an account is closed, it returns the deposit plus accrued interest to the Customer through a credit applied to the final bill, or by cheque as decided by Hydro One. Any excess deposit amount will be returned to the Customer directly, within six weeks after the account is closed. If Hydro One does not receive full payment from the Customer, a security deposit will be applied after the final bill due date.

Hydro One may offer other options to eliminate the need for security deposits. For more information, refer to the Hydro One security deposit policy at [www.HydroOne.com](http://www.HydroOne.com).

#### B. Acceptable Forms of Security

Hydro One accepts security deposits in the following forms:

1. Hydro One payment channels including cash, cheque, EFT etc.; or
2. an automatically renewing irrevocable letter of credit from a bank or financial institution, as defined in the Bank Act, or a combination thereof.

**2.4 Tariffs and Charges**

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Hydro One accepts equal monthly installments over a period of up to four months. Customers can make arrangements with Hydro One by calling at 1-888-664-9376.

**C. Calculation of Security Deposit Amounts**

Hydro One calculates security deposits based on Customers’ average monthly load within the most recent 12 consecutive months (within the past two years). The maximum amounts are calculated as follows:

- Monthly billed Customers - 2.5 times Customer’s estimated bill over the past 12 months

If Customers have less than 12 consecutive months of relevant service history with Hydro One, within the past two years, the security deposit will be based on Hydro One’s reasonable estimate.

**D. Limits on Amount of Security Required**

**All rate classes:**

Where a Customer has a payment history which discloses two or more Disconnection notices in a 12-month period, Hydro One calculates the amount of the security deposit on 2.5 times that Customer’s highest actual, or estimated, monthly load.

**Demand Billed rate class:**

If a Customer provides Hydro One with a credit rating from a recognized credit rating agency, the maximum amount of security deposit is reduced, as shown in the following table. (Equivalent ratings from Moody’s and Dominion Bond Rating Services are also accepted.)

| <b>Credit Rating (using Standard &amp; Poor’s Ratings)</b> | <b>Allowable Reduction</b> |
|--|----------------------------|
| AAA- and above or equivalent                               | 100 per cent               |
| AA-, AA, AA+ or equivalent                                 | 95 per cent                |
| A-, from A, A+ to below AA or equivalent                   | 85 per cent                |
| BBB-, from BBB, BBB+ to below A or equivalent              | 75 per cent                |
| Below BBB- or equivalent                                   | 0 per cent                 |

**E. Review and Updating of Security Deposits**

Hydro One reviews security deposits annually to determine whether to:

- fully refund the Customer due to good payment history
- partially refund the Customer due to a reduction in electricity use
- increase the amount of the security deposit due to an increase in electricity use
- change the amount of the security deposit due to a change in the calculation process
- keep the amount of the security deposit unchanged.

Security deposits will be returned after one year of good payment history.

If some or all of the security deposit is to be returned to the Customer, Hydro One will promptly credit the Customer’s account, including applicable interest in accordance with the Distribution System Code.

**F. Interest on Security Deposits**

Interest is payable on cash or cheque security deposits and will accrue monthly once Hydro One receives the total deposit. Interest is calculated at the prime business rate (as published on the Bank of Canada website) less two per cent, updated quarterly, to a minimum of zero per cent.

Interest due is paid out at least annually, or upon return of the security deposit or closure of the account, whichever comes first. Interest is credited to the Customer’s account.

### 2.4 Tariffs and Charges

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#### **G. Waiver/Return of Security Deposit**

Hydro One may, at its discretion, require non-residential Customers who do not have a payment history for the relevant time period to provide security when they apply for service or open an electricity account. Hydro One may waive the security deposit if the Customer provides a reference letter that confirms good payment history from another electricity or natural gas utility in Canada, where the Customer was previously a Customer for the relevant time period (see [section 2.4.3 A](#)).

Hydro One returns security deposits for all Customers who demonstrate good payment history with Hydro One after one year

For all Customers except non-residential > 5000 kW, Hydro One may decide to waive the security deposit when it receives, at the Customer's expense, a satisfactory credit check from TransUnion, Equifax or Dun and Bradstreet credit reporting agencies.

A satisfactory credit check or utility reference letter will be accepted to waive the security deposit if a good payment history is not maintained.

Customers must maintain a good payment history in order for Hydro One to refund their security deposit. If good payment history is not maintained, Hydro One will not accept a reference letter from another utility. Customers should note that utility reference letters are valid for a one-year period.

#### **H. Enforcement where security deposit not paid**

Payment of security deposits identified as a condition of service or continuing service will be enforced in the same manner as any monies owed to Hydro One for the supply of electricity.

#### **I. Security from Embedded Distributors**

Embedded Distributors must post security deposits with Hydro One unless a good payment history is demonstrated for a period of at least one year. Security deposits are calculated as follows:

##### **Maximum Security Deposit Amount: Wholesale Market Participants**

Security deposits are based on average monthly non-competitive electricity costs billed by Hydro One, multiplied by a Billing Cycle Factor of 2.5.

##### **Maximum Security Deposit Amount: Non-Wholesale Market Participants**

Security deposits are based on a Billing Cycle Factor of 2.5 multiplied by the average monthly non-competitive electricity costs, plus competitive electricity costs, using the same average monthly consumption and cost of energy that the IESO uses for the purpose of determining prudential support obligations for Distributors.

##### **Security Deposit Reductions for Good Payment History:**

Hydro One reduces a security deposit amount required from Embedded Distributors based on a Customer's satisfactory credit check (see [section 2.4.3 D](#)), and will return a security deposit if good payment history, as outlined in [section 2.4.3 A](#), are met.

##### **Review and Adjustment of Security:**

Hydro One reviews security deposit amounts on a periodic basis to determine whether:

1. the security deposit should be returned to the Customer, based on good payment history demonstrated;
2. the security deposit amount should be adjusted, based on a recalculation of the maximum security deposit amount.

### 2.4 Tariffs and Charges

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#### 2.4.4 Billing

In this section, references to monthly, quarterly and annually are notional and approximate time periods only. They are not to be construed as calendar-based time periods.

##### A. Billing Frequency

Depending on the rate class and service size, Customers are billed on a monthly or quarterly basis.

##### B. Low-Use Billing Suspension Credit

Hydro One may adjust billing for Customers classified as 'General Service Energy Billed' (GSe) with less than 2,500 kWh per year who were activated prior to January 1, 1996. Customers must sign an agreement each year that service suspension is requested. Only one service suspension will be granted in each 12-month period.

Suspensions can be four or six months, and Customers will be credited in an amount equal to the monthly service charge multiplied by the number of months of the suspension (the suspension credit).

Hydro One will reverse the suspension credit and charge a \$200 administration fee if the Customer violates any one of the following conditions (in addition to billing for any electricity consumed during the suspension period):

1. if any usage has occurred during the suspension period; or
2. the total annual electricity consumption exceeds 2,500 kWh

##### C. Use of Estimates

In months where no reading is obtained, or where meter-reading data is not available to calculate a Customer's bill, Hydro One will estimate energy (and demand if applicable) based on the historical usage for the premises or the average usage for the rate class in that geographic area (if historical usage is unavailable).

Customers who do not have an Interval Meter or are not billed on Time-of-Use may avoid receiving an estimated meter reading by providing a reading. Customer meter reads must comply with Hydro One's established practices and pass billing validation checks.

##### D. Closing of Account

For account closures, Hydro One requires five business days to arrange for a final read and issue a final bill.

##### E. Pro-ration of Accounts

If a Customer's bill is for a period shorter or longer than the standard billing period, or if rates were revised on a date that does not align with a Customer's billing or meter reading date, the account will be prorated.

##### F. Budget Billing Plans

Budget billing plans are available to all Standard Supply Service Customers and Retailer-enrolled Customers. To help smooth electricity costs over the year, the plan bills Customers for an equal portion of the previous year's electricity charges per bill period (as defined in [Section 2.6](#) of the Standard Supply Service Code) and then reconciles the balance owing in the anniversary month. Periodic adjustments may be made to the regular budget bill amount if Rates or usage change.

Budget billing is not available to Demand Billed Customers whose meters are read monthly, summary billed, complex billed, Generation (FIT / MicroFIT), lighting or unmetered Customers.

### 2.4 Tariffs and Charges

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#### **G. Billing Errors: Over and Under Billing**

Where a billing error results in a Customer or Retailer being overbilled, and where Measurement Canada has not become involved in the dispute, Hydro One will credit the Customer or Retailer for the amount in error, for up to two years from the date when the error was initially discovered.

Hydro One's standard billing practice includes estimated meter readings. If the billing error is not the result of Hydro One's standard billing practice, Hydro One will pay interest on the amount credited, at the rate stipulated in the Retail Settlement Code.

Where a billing error results in a Customer or retailer being under-billed, and where Measurement Canada has not become involved in the dispute, the Customer or Retailer will pay Hydro One the amount not previously billed.

**For Customers who are not responsible for the under-billing**, Hydro One has two years from the date when the error was initially discovered to charge Customers the under-billed amount.

**For Customers who are responsible for the under-billing** (by way of tampering, willful damage, unauthorized energy use or other action). The Customer will pay the amount under-billed and a late payment charge, as determined by Hydro One in accordance with these Conditions of Service. Hydro One may require payment of the full under-billed amount. This will be presented by means of a corresponding charge on the next regularly scheduled bill issued to the customer or on a separate bill to be issued to the customer responsible for the under-billing amount. Where disconnection has occurred, Hydro One may require payment prior to the reconnection of service upon request by the customer responsible.

See section 2.3.7.7 for further information on Measurement Canada meter dispute testing.

#### **H. Transformation Loss Adjustment**

A Transformer Loss Adjustment shall be applied to Sub-Transmission rate class Customers, who require a billing adjustment for transformer losses as a result of being metered on the secondary side of a transformer. (See Rate schedules at [www.HydroOne.com](http://www.HydroOne.com)).

#### **I. Transformation Loss Allowance**

Customers who require a billing adjustment for transformer losses as a result of being metered on the primary side of a transformer qualify for a Transformer Loss Allowance. Transformer Loss Allowance is not applicable to Sub-Transmission rate class Customers. (See rate schedules at [www.HydroOne.com](http://www.HydroOne.com)).

#### **J. Customer-Supplied Transformation Allowance**

All Customers (except Sub-Transmission Customers) who are Demand Billed or Energy Only Billed, and provide their own transformers, qualify for a Customer-supplied transformer allowance. Embedded Generators only qualify for the allowance for load taken from Hydro One. The credit will be given to the account holder when the transformer is proven not to be owned by Hydro One. (See Rate schedules at [www.HydroOne.com](http://www.HydroOne.com))

#### **K. Annual Monitoring of Electricity Usage**

For non-residential Customers, Hydro One monitors electricity use and monthly peak demand annually to determine if the account should be reclassified for billing purposes or, at Hydro One's discretion, if the metering equipment requires replacing. The review occurs in the first quarter of each year and is based on a historical period up to 36 months.



### 2.4 Tariffs and Charges

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Customers are notified of any change in writing at least 30 days in advance, with the change becoming effective on the next scheduled bill after the annual review is completed. The reclassification is on a go-forward basis with no retroactive adjustments.

Electricity use for non-residential Energy Only Billed Customers is monitored to identify any services that may have grown beyond 400,000 kWh annually, and/or, where Meter data exists showing that the average monthly peak demand is equal to or greater than 50 kW. For those services that are identified, the following may apply:

1. For Energy Only Billed Customers with an Energy Only Meter - At Hydro One's discretion, a Demand Meter will be installed and the account will be reclassified as Demand Billed.
2. For Energy Only Billed Customers with a demand and/or Interval Meter – Customers will be reclassified as Demand Billed.

Demand Billed Customers, including those with Interval Meters, will be monitored to identify services that have dropped below 50 kW average monthly peak demand. At Hydro One's discretion, an Energy Meter will be installed and these accounts will be reclassified as Energy Only Customers.

Demand billed Customers, who are eligible for RPP and with an annual consumption greater than 250,000 kWh, will be moved from RPP to SPOT pricing, unless Hydro One receives a 'large volume farm or multi-unit residential' declaration form supporting the eligibility for RPP. Customers will be moved from SPOT based pricing to RPP where the annual consumption is less than 250,000 kWh or average monthly peak demand is less than 50 kW.

Customers in the General Service Rate class will be reclassified into the Sub-Transmission Rate class if their average monthly peak demand is greater than or equal to 500 kW over the measurement period and they meet the requirements stated in [section 3.3](#). Sub-Transmission Customers will be reclassified into the General Service Rate class if their average monthly peak demand over the measurement period is less than 300 kW.

Non-residential Customers (General Service or Sub-Transmission) may request a review of their Rate class, and Hydro One will reclassify them, if average monthly peak demand for a period of the most recently billed five consecutive months falls outside limits applicable to the Customer's current Rate class (as per the Distribution System Code). Reviews will not be performed more than once per calendar year.

#### **L. Billing Determinants for Demand Customers**

Hydro One establishes billing determinants for Demand Billed Customers at 100 per cent of kW or 90 per cent of kVA where kVA metering is installed, whichever is greater. When a Customer's power factor is known to be less than 90 per cent, a kVA meter or other equivalent electronic meter is used for measuring and billing.

#### **2.4.5 Gross Load Billing**

Gross Load Billing applies to Demand Billed load Customers with Load Displacement Generation Facilities; retail settled Embedded Generation Facilities; and LDCs with Embedded Generation Facilities that meet the following criteria:

1. Sub-Transmission classified load Customer (see [section 3.3](#));
2. Approval for such generation was obtained after October 30, 1998; and



### 2.4 Tariffs and Charges

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3. The Generation Facility contains at least one single generating unit equal to or greater than one MW with non-renewable generation, or equal to or greater than two MW for renewable generation.

Customers meeting the above criteria can be billed at the gross demand level for the below charges:

1. Retail Transmission Rate - Line Connection and Transformation Connection Service charges; and
2. Sub-transmission volumetric charges.

Gross demand calculations involve adding back, to the applicable charges, the generation output (which is metered at the generator terminals) to the electricity drawn by the Customer.

Details of Gross Demand level calculations and metering aggregation are provided in the designated Retail Settlement Totalization Table maintained by Hydro One.

#### 2.4.6 Payments and Overdue Account Interest Charges

##### A. Payment Options

Customers may pay their electricity bills by cheque or money order (mailed with the remittance stub portion of the bill) to Hydro One at the address on the stub; in person at most Canadian financial institutions; through automated banking machines, telephone banking or Internet bill payment services offered through the Customer's financial institution; by credit card (service fee applies) through Paymentus, Hydro One's third-party payment processor; or by using MoneyGram or Western Union. All payments to Hydro One must be in Canadian dollars.

Hydro One also offers a pre-authorized payment option "AutoPay".

##### B. Late Payment Charges

Bills are due on the billing date. A late payment charge is applied, and is owed by the Customer, if payment is not received within 19 days after the billing date. When the due date for payment is a weekend or holiday, the payment will be required on the next business day.

Hydro One's late payment charge is 1.5% per month, compounded monthly (19.56% per year). Late payment charges are calculated from the billing date to the date the next bill is issued. Late payment charges are applied to the outstanding balance. If partial payment is made within 19 days after the billing date, the late payment charge will apply only to the amount outstanding, after subtracting the partial payment. Late payment charges will be added to the Customer's next bill.

An allowance of 3 days is provided after the due date for payment, for receipt of payment by mail.

Customers who choose electronic funds transfer or pre-authorized payment will have their payment amount automatically withdrawn from their designated bank account on the 19th day after the billing date. The withdrawal date and amount are clearly indicated on each bill.

##### C. Allocation of Payments

Any payments received are applied to the total outstanding balance of the electricity account, which includes the billed amounts, security deposits, late payment or other charges. Payment cannot be directed to specific portions of the outstanding balance.

### 2.4 Tariffs and Charges

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#### 2.4.7 Arrears Management Program

##### A. Residential Customer

Residential Customers may request to enter into a payment agreement for the total outstanding balance of their electricity account. If Hydro One agrees to enter into a payment agreement, the Customer may be required to repay the security deposit and make a down payment of up to 15 per cent of the total outstanding balance.

##### B. Eligible Low-Income Customer

Eligible Low-Income Customers may be required to repay the security deposit and make a down payment of 10 per cent of any electricity charge arrears, including applicable late payment charges but excluding other service charges, as part of the payment agreement.

For Eligible Low-Income Customers who enter into a payment agreement, Hydro One will waive any service charges related to collection, Disconnection, non-payment or load control devices, and will not include such charges in the payment agreement only if a Customer is entering into the agreement for the first time, or is entering into the agreement after having successfully completed a previous payment agreement as an Eligible Low-Income Customer. Eligible Low-Income Customers must pay initial late payment charges accrued to the date of the payment agreement. Additional late payment charges are waived during the course of the agreement.

### 2.5 Customer Information

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#### 2.5.1 Retail Settlement Code Requirements

Hydro One will provide current and historical usage information to Customers and Retailers in accordance with [Chapter 11](#) of the Retail Settlement Code.

Customers with remotely read Interval Meters will have access to meter usage data in accordance with [section 2.3.7.3](#) of this document.

##### A. Current Usage Data

Customers with cumulative volume demand and non-remotely read Interval Meters will receive their current usage data on their Hydro One electricity bill.

Customers with non-remotely read Interval Meters will have access to meter usage data when they sign the 'Read Only Access Agreement'. Details are included in Appendix A.

Hydro One will provide access to a Customer's meter or meter information under the following conditions:

1. Hydro One will select the access windows it requires to read the meter.
2. If Hydro One's access to the meter is hindered, or a Customer's access to the meter corrupts usage information, Hydro One may suspend a Customer's right to access until any outstanding problems are resolved.
3. The Customer will pay for any software, hardware and other services, including installation of a secondary meter access system, required to obtain direct access to meter information.
4. The Customer will bear all costs incurred by Hydro One to correct problems caused by a Customer's direct access to the meter; and
5. If the Customer assigns his or her right to direct meter access to a Retailer or third party, the Customer will be responsible for the actions of the assigned party.

##### B. Usage Data Generated by Meters

Customer access to hourly electricity usage information will be available online when they are switched to Time-of-Use pricing. Customers must accept the End User Agreement on the Hydro One website to gain access.

##### C. Historical Information

Hydro One will provide Customer-specific information to Retailers through the Electronic Business Transaction (EBT) system at no charge. If not delivered through the EBT System, Hydro One honours requests to deliver data directly to retailers and Customers twice a year, at no direct charge to retailers or Customers. Additional requests will also be honoured, but Hydro One may charge a fee for such requests. A request is considered to be data delivered to a single address.

Where available, Hydro One will provide Customers with at least 12 months of historical usage information, information about meter configuration, and payment information (collectively, "Historical Information"). Historical information is released to the Customer, or any third party designated by the Customer, subject to the following:

1. if the third party is a Retailer, the Customer has provided the Retailer with written authorization for the release; or
2. if the third party is someone other than a Retailer, the Customer has provided Hydro One with written authorization for the release.

Hydro One will not provide Retailers with Time-of-Use consumption data for Customers in areas where Hydro One has elected to not implement Time-of-Use pricing.

### 2.5 Customer Information

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#### 2.5.2 Protection of Individual Privacy and Customer Information

##### A. Privacy Legislation and the Licence

Hydro One is subject to federal privacy legislation that includes specific restrictions concerning the collection, use and disclosure of Personal Information.

Hydro One's Licence also prohibits Hydro One from disclosing information regarding a Customer to any party without the Customer's written consent, except where such information is required to be disclosed:

1. to comply with any legislative or regulatory requirements, including the conditions of the Licence;
2. for billing, settlement or market operation purposes;
3. for law enforcement purposes; or
4. to a debt collection agency for the processing of past due accounts of the Customer.

The Licence allows Hydro One to disclose information regarding a Customer where the information has been sufficiently aggregated such that the Customer's particular information cannot reasonably be identified.

##### B. Hydro One's Collection, Use and Disclosure of Customer Information

For the purposes identified in the following paragraph, Hydro One collects information about its Customers, including Personal Information (collectively, "Customer Information"), primarily directly from its Customers but also from third parties (including credit bureaus or personal references), whether verbally, in writing or via the [www.HydroOne.com](http://www.HydroOne.com) website. The information collected is primarily:

1. information establishing identity (for example: name, address, phone number, date of birth, etc.)
2. information related to the provision of electricity and/or Distribution Services by Hydro One and other electricity Distributors
3. information about financial behaviour, such as payment history and creditworthiness.

Hydro One uses and discloses information about its Customers (which includes Personal Information) for the following purposes:

1. to establish and maintain responsible commercial relations and operations which includes authenticating Customer identity, billing and payments and maintaining records of same;
2. to assess Customer credit history from time to time to determine whether Hydro One requires a security deposit;
3. to help Hydro One verify Customer creditworthiness, collect a debt or enforce an obligation owed by a Customer and/or manage and assess Hydro One's financial risks;
4. to collect and process past due accounts of the Customer which includes disclosing Customer information (including Personal Information) to a debt collection agency and/or a credit reporting agency;
5. to contact Customers (at mailing and/or service address) as well as respond to Customer inquiries or service issues to monitor and assess quality of service (for example, Hydro One may monitor and/or record telephone communications with you for quality assurance and training purposes);

### 2.5 Customer Information

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6. to address and respond to issues related to the usage of critical power dependent, medical equipment during an outage;
7. to understand Customer needs and eligibility for products and services;
8. to recommend particular products and services to meet a Customer's needs;
9. to develop, enhance, market, provide and notify Customers about electricity products and services, events, causes and programs sponsored by Hydro One ;
10. to meet legal and regulatory requirements;
11. to provide Customers with information about electricity, the electricity market and rates; and
12. for the following conservation and demand management (CDM) purposes:
  - i. marketing, introducing, administering and/or implementing CDM programs and products
  - ii. carrying out studies or assessments to determine the feasibility or viability of a CDM program, project, opportunity and/or product
  - iii. compiling and analyzing data for its Customers regarding their energy usage and energy efficiency opportunities, in ways that can encourage conservation or improve Customer satisfaction
  - iv. tracking and monitoring participation levels and interest in CDM programs and products;
  - v. otherwise dealing with or managing its CDM mandate.

Hydro One does not trade or sell Customer Information to others. Hydro One will not use or disclose Customer Information for purposes other than those for which it was collected, except with the Customer's consent or in accordance with Applicable Laws (including Hydro One's Licence).

The information will be used and disclosed internally within Hydro One by and among staff members (for example, its Customer care staff and its internal auditors) who need the information in the performance of their duties, and where the use and disclosure is necessary and proper in the discharge of Hydro One's business.

In some instances, Customer Information will be shared with third party service providers who perform services on Hydro One's behalf (such as Customer service, outage management, data storage, data cleansing, and conservation and demand management related services) and/or who provide us with other types of services to help us deliver and/or improve the services we provide (for example, auditing services, data analysis, consumer risk assessments and consulting/advisory services). These third party service providers are given only the information that is necessary for them to perform those services that Hydro One has contracted them to provide. They are prohibited from storing, analyzing or using that information for purposes other than the services they have been contracted to provide. Hydro One uses contractual means to require service providers to protect Customer Information from loss, theft and unauthorized access, use, disclosure and otherwise, in a manner consistent with the privacy policy and practices established by Hydro One. In the event service providers are located outside of Canada, they are bound by, and Personal Information may be disclosed in accordance with, the laws of the jurisdiction in which they are located.

To measure performance and develop service improvements, Hydro One may disclose Customer Information to third party service providers for the purpose of conducting surveys on Hydro One's behalf. The providers are bound by strict confidentiality contracts to use the information for the sole purpose of the survey. Customers who want Hydro One not to release their information to a service provider for survey purposes, should call 1-888-664-9376.

### 2.5 Customer Information

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#### **C. Access to Personal Information**

Hydro One retains Personal Information only as long as necessary for the purposes described in this section.

Customers may obtain access to their Personal Information held by Hydro One at any time, and review its content and accuracy, and have it amended as appropriate. However, access may be restricted as permitted or required by law. Customers can request access by contacting 1-888-664-9376.

Further information about Hydro One's practices and procedures concerning the collection, use and disclosure of Personal Information can be found in Hydro One's Privacy Code (available at [www.HydroOne.com](http://www.HydroOne.com)).

## SECTION 3 – CUSTOMER CLASS SPECIFIC

### 3.1 Residential

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#### 3.1.1 Year-round Residential

This Rate classification applies to a Customer's principal residence. It may include additional buildings served through the same meter, provided they are not rental income units.

To be classified as Year-round Residential, the following criteria must be met:

1. The Customer represents and warrants that for as long as he or she has Year-round Residential rate status for the identified dwelling, he or she will not designate another property as a year-round residence;
2. The Customer must live in this residence for at least four days of the week and eight months of the year and not reside anywhere else for more than three days a week during eight months of the year;
3. The same address that is used for this residence must also appear on other documents such as the Customer's driver's licence, credit card invoices, property tax bill and the Customer's mailing address on the electricity bill; and
4. Customers who are eligible to vote in Ontario or federal elections must be enumerated for voting purposes at the address of this residence.

Multi-unit residential establishments (such as apartment buildings) that are bulk-metered are normally classified as General Service; however, Hydro One may, at its discretion, choose to classify up to four residential units as Year-round Residential.

Where electricity service is provided to a combined residence and business (including agricultural usage), and the wiring does not allow for separate metering, Customers are classified as residential so long as Demand Metering is not required.

**Residential UR** - Customers classified as 'Residential UR' are year-round residences in an Urban Density Zone.

**Residential R1**- Customers classified as 'Residential R1' are year-round residences in a Medium Density Zone.

**Residential R2** - Customers classified as 'Residential R2' are year-round residences in a Low Density Zone.

#### 3.1.2 Seasonal Residential

This rate class includes cottages, chalets and camps and any other residential services that do not meet the Year-round Residential criteria.

#### 3.1.3 Rural and Remote Electricity Rate Protection (RRRP)

Qualifying year-round residences are eligible to receive RRRP. For eligible Customers, the monthly service charge amount is reduced by the applicable RRRP credit. (See [Section 79.1](#) of the Ontario Energy Board Act)

#### 3.1.4 Connection and Upgrade Charges

Residential Customers who make a written request for Connection and whose Building Lies Along Hydro One's existing distribution lines are required to pay Hydro One connection charges in accordance with [section 2.1.1](#).

### 3.1 Residential

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Residential Customers who make a written request for Connection and whose building is within Hydro One's service area are required to pay Hydro One connection charges in accordance with [section 2.1.2](#).

Residential Customers who request an upgrade to the Connection Assets at their premises will pay the costs associated with upgrading the Connection Assets, with the exception of standard overhead distribution transformation and standard metering. If Expansion of the Distribution System is required to accommodate the upgrade request, all costs associated with the upgrade will be treated in accordance with [section 2.1.2](#).

#### 3.1.5 Ownership Demarcation Point and Operational Demarcation Point

For Secondary Services that Hydro One wholly-owns and maintains, the Ownership Demarcation Point and the Operational Demarcation Point are located at:

1. the top of the Customer's service entrance stack, for overhead connections;
2. the line side of the Customer's meter base, for underground connections; and
3. the supply connectors on the load side of the Current Transformer (CT) for a central-metered service, with the exception of the meter base and stack which are owned and maintained by the Customer.

For Secondary Services that the Customer wholly-owns and maintains, the Ownership Demarcation Point and the Operational Demarcation Point are the secondary connections at the transformer, or the service bus.

Hydro One maintains the portion of the Secondary Service that it owns (including repair and like-for-like replacement of a wire or cable that has failed irreparably). Customers are responsible for all civil work, supports, vegetation and landscaping associated with any repair or replacement to the Hydro One portion of Secondary Services located on their property.

For Primary Service residential Customers, the Ownership Demarcation Point will be located at the line switch or primary live line clamp.

For Hydro One-owned transformers that are installed on a Customer-owned pole, or Customer-supplied transformer pad, Customers must transfer the grounding system to Hydro One prior to energization.

For Customers who own a primary disconnecting device, this device is considered the Operational Demarcation Point and is under the operating control of Hydro One.

#### 3.1.6 Customer-Supplied Secondary Wire

Customers are required to install, own and maintain the secondary conductor under any of the following conditions:

1. conductor terminations are located inside the Customer's building;
2. conductors are installed beyond the service entrance;
3. conductors are connected to a Primary Service; or
4. non-standard conductor installations.



### 3.1 Residential

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#### 3.1.7 Residential Rate Classification Customers

##### A Voltage

For Residential Customers, normal secondary supply voltage is 120/240V Single Phase, unless otherwise approved by Hydro One.

##### B Metering

Customers will make the following provisions to accommodate Hydro One's Meter Installation requirements:

1. Where the rating of the main disconnecting device does not exceed 200A, Customers will provide a 120/240V, 200A, Single Phase 4-jaw outdoor meter socket connected on the line side of the main disconnecting device.
2. Where the rating of the Customers main disconnecting device is greater than 200A and does not exceed 400A, Customers will provide an out door combination meter socket and metering transformer enclosure that is connected on the line side of the main disconnecting device equipped with a 120/240V, 20A, 5-jaw meter socket with 4 pole test switch.

Hydro One will provide and install the revenue metering CT. The Meter Installations must be in a location that is acceptable to Hydro One.

For metering installed on poles, the 5-jaw meter socket will incorporate a 4 pole test switch. Customers must install, own and maintain the pole and transfer the metering's grounding system to Hydro One prior to energization.

#### 3.1.8 Residential Three Phase Customers

##### A Voltage

When approved by Hydro One, for Residential Three Phase Customers the nominal supply voltage required is 120/208V four-wire or 347/600V four-wire.

##### B Metering

To accommodate Hydro One's Meter Installation, Customers will provide equipment to comply with one of the following arrangements as determined by Hydro One, in a location acceptable to Hydro One:

1. 120/208V, 200A, Three Phase 7-jaw meter socket connected on the load side of the main disconnecting device.
2. 347/600V, 200A, Three Phase 7-jaw indoor meter socket with an insulated neutral jaw, connected on the load side of the main disconnecting device.
3. Metering for 347/600V, Three Phase four-wire circuits with only one metering point per service entrance and maximum parallel runs of 500MCM conductor must use transformer-rated metering using 3 CTs and 3 PTs on the load side of the Customer's main disconnect switch. CTs and PTs must be Measurement Canada approved for revenue billing.
4. Metering for 347/600V, Three Phase four-wire circuits with more than one metering point per service entrance may use self-contained metering up to 200A on the load side of the Customer's service entrance (see the Electricity Safety Code).

For metering installed on poles, Customers must install, own and maintain the pole and transfer the metering's grounding system to Hydro One prior to energization.

## SECTION 3 – CUSTOMER CLASS SPECIFIC

### 3.2 General Service (Below and Above 50 kW)

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These Rate classifications apply to any service that does not fit the description of the Year-round Residential, Seasonal Residential, Sub-Transmission, Sentinel Lighting and Street Lighting, or Embedded Generator Customer Rate classes. Typically, General Service Customers include commercial, industrial, educational, administrative, auxiliary and government-type services, as well as combined services (where the owner of one property uses the service for a variety of purposes) and all multiple services excluding residential services with up to four units.

Classification of General Service Customers is dependent on the Customer's average monthly billing demand (see [section 2.4.4](#)). General Service Customers are either energy-billed (less than 50 kW) or demand-billed (equal to or greater than 50 kW)

**General Service, Urban Density UG** - This Rate class applies to General Service Customers located in an Urban Density Zone.

**General Service, GS** - This Rate class applies to General Service Customers who are not located in an Urban Density Zone.

**Unmetered Connections** - See [section 3.7](#).

#### 3.2.1 Connection and Upgrade Charges

A General Service Customer who make a written request for Connection, and whose Building Lies Along Hydro One's existing distribution lines, are required to pay Hydro One Connection charges in accordance with [section 2.1.1](#).

General Service Customers who make a written request for Connection are required to pay Hydro One Connection charges in accordance with [section 2.1.2](#).

General Service Customers who request an upgrade in Connection Assets at their premises will pay Hydro One the costs associated with upgrading the Connection Assets, with the exception of standard overhead distribution transformation and standard metering. If an Expansion of the Distribution System is required to accommodate the upgrade, all costs associated with the upgrade will be treated in accordance with [section 2.1.2](#).

If, after completing this upgrade, a General Service Customer believes they should be re-classified as a Sub-Transmission Customer, Hydro one will consider a load forecast and Rate classification change when the General Service Customer submits a Rate classification change request. Otherwise, in the absence of a formal request, Hydro One will consider a Rate classification change only as part of the annual demand monitoring program.

#### 3.2.2 Ownership Demarcation Point and Operational Demarcation Point

For Secondary Service General Service Customers, Ownership Demarcation Points and Operational Demarcation Points will be located as follows:

1. where the Customer's conductors emerge from the service head or mast on overhead Secondary Services at either the secondary terminal (spade) of the transformer or the secondary connection pedestal located at the property line, as determined by Hydro One.
2. For underground Secondary Services, at the line side of the Customer's meter base.

For Primary Service General Service Customers, the Ownership Demarcation Point will be located at the primary live line clamp or line switch.

Where a Hydro One-owned transformer is installed on a Customer-owned pole or Customer-supplied transformer pad, the grounding system must be transferred to Hydro One prior to energization.

## SECTION 3 – CUSTOMER CLASS SPECIFIC

### 3.2 General Service (Below and Above 50 kW)

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For Customers who own a primary disconnecting device, this device will be the Operational Demarcation Point and will be under the operating control of Hydro One.

#### 3.2.3 Voltage

Customers must consult with Hydro One early on to confirm the availability of specific voltages within the Hydro One Distribution System.

Refer to [section 2.3.4](#) for Hydro One's standard voltage offerings.

#### 3.2.4 Metering

##### A. Metering Equipment

For metering installed on poles, Customers must install, own and maintain the poles. The grounding system for the metering must be transferred to Hydro One prior to energization.

To accommodate Hydro One's Meter Installation, Customers will provide equipment to comply with the following arrangements as determined by Hydro One, and in a location acceptable to Hydro One:

##### **Self-Contained Metering Up to 200A**

The rating of a Customer's main disconnection device for a self-contained Meter Installation (at one of the three secondary voltages in [section 3.2.3](#) must include one of the following:

1. 120/240V, 200A, Single Phase 4-jaw outdoor socket-base meter connected on the line side of the main disconnecting device;
2. 120/208V, 200A, Single Phase 5-jaw socket-base meter (network) connected on the load side of the main disconnecting device;
3. 120/208V, 200A, Three Phase 7-jaw socket base meter connected on load side of the main disconnecting device; or
4. 347/600V, 200A, Three Phase 7-jaw indoor socket base meter connected on the load side of the main disconnecting device.

Metering of any Three Phase secondary voltages other than those specified must use transformer-rated metering.

##### **120/240V, 400A**

Where the rating of the Customer's main disconnecting device is between 200A and 400A, a General Service Single Phase transformer-type Meter Installation at 120/240V must be provided with:

1. An outdoor 120/240V, 20A 5-jaw meter socket with 4 pole test switch combination meter socket and metering transformer enclosure connected on the line side of the main disconnecting device; or
2. 120/240V, 20A, 5-jaw meter socket connected on the line side of the main disconnecting device, with a 4 pole test switch; and
3. 90 cm x 90 cm x 30 cm instrument transformer enclosure; and
4. 19 mm conduit from the instrument transformer enclosure to the meter socket.

##### **Three Phase Less than 50 kW**

Where Hydro One forecasts the monthly average peak demand will not exceed 50 kW, a Three Phase transformer-type Meter Installation that is not equipped with Interval Meters must be provided with:

## SECTION 3 – CUSTOMER CLASS SPECIFIC

### 3.2 General Service (Below and Above 50 kW)

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1. an acceptable indoor/outdoor meter enclosure;
2. an indoor/outdoor instrument transformer enclosure with minimum dimensions of 121 cm x 121 cm x 30 cm with maximum parallel runs of 500MCM conductor; and
3. 31 mm conduit from the instrument transformer enclosure to the meter enclosure.

The instrument transformer enclosure will be installed at a height of no less than 90 cm and maximum 100 cm from finish grade.

#### **Three Phase Greater than or equal to 50 kW**

Where Hydro One forecasts the monthly average peak demand will exceed 50 kW and the rating of the Customer's main disconnecting device is less than 3000A at low voltage, a transformer-type Meter Installation will have an Interval Meter and must be provided with:

1. an acceptable meter enclosure;
2. an indoor/outdoor instrument transformer enclosure with minimum dimensions of 121 cm x 121 cm x 30 cm with maximum parallel runs of 500MCM conductor;
3. 31 mm conduit from the instrument transformer enclosure to the meter enclosure when requested by Hydro One, a voice-grade direct access telephone line that is active 24 hours every day, seven days per week, and protected by a 13 mm conduit from the telephone entrance equipment into the meter enclosure; and
4. prior to the installation of an Interval Meter, the Customer must provide a half-inch conduit complete with fish tape from the Customer's telephone room to the network interface device (NID) located near the metering cabinet, if applicable.

The instrument transformer enclosure must be installed in accordance with [section 3.2.4](#) of this document at a height of no less than 90 cm and maximum 100 cm from finish grade.

For a service greater than 600 A or a service that requires a cable size larger than 500MCM with more than two runs the instrument transformer must be integrated into the switchgear.

#### **Instrument Transformer Enclosure**

Customers who require a transformer-type Meter Installation must provide a metal instrument transformer enclosure that is:

1. equipped with a hinged door/s or other means for securing the instrument transformers in the enclosure, as well as a padlock hasp or other means to render the enclosure inaccessible to unauthorized persons
2. connected on the load side of the main disconnecting device
3. sized as follows:

##### **120/240 V Single Phase service**

- Over 200 A, up to and including 400 A: 90 cm x 90 cm x 30 cm (36"x 36" x 12")
- Over 400 A: 121 cm x 121 cm x 30 cm (48" x 48" x 12")

### 3.2 General Service (Below and Above 50 kW)

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#### 120/208 V Three Phase four-wire service

- Between 200 A and 600 A: 121 cm x 121 cm x 30 cm (48" x 48" x 12")

#### 347/600 V Three Phase four-wire service

- Over 200A, up to and including 600A: 121 cm x 121 cm x 30 cm (48" x 48" x 12")

The maximum cable size used must be 500MCM with a maximum conductor in run of two. The enclosure installation must be no less than 90 cm (36") and no more than 100 cm (40") from finished grade.

For a service greater than 600 A or a service that requires a cable size larger than 500MCM or greater than a parallel run the instrument transformer must be integrated into the switchgear.

**Where a 'meter only' cabinet is required**, the dimensions must be 0.61 m x 0.412 m x 0.257 m (24" x 16.2" x 10.1")

**347/600 V, Three Phase four-wire circuits** with one metering point per service entrance will use transformer-rated metering consisting of three CTs and three PTs; and

4. includes one of the following meter loop arrangements: spare conductors not less than 450 mm in length equipped with connectors supplied and terminated by the Customer at each bar-type current transformer Connection point or Three Phase conductors installed through ring-type current transformers (or other acceptable provision for connecting CTs).

#### Multi-Occupancy Metering

Meter Installations for multiple occupancy structures where the Customer requires individual meters, and where the rating of the main disconnecting device exceeds 400A, must satisfy the following requirements:

1. Meters must be installed in a central service room with access (see [section 1.6.2](#));
2. The central service room must be separated from the rest of the building by an approved fire separation;
3. Splitter trough covers must be hinged to open downward and equipped with provision for a padlock and seal;
4. A full-sized neutral supply conductor must extend from any splitter troughs to each meter socket;
5. Conductors to each meter must have a separate sub-service box.
6. Sub-service boxes must be permanently identified with an approved address or unit number, and the same number must be used to identify the service panel inside the unit; and
7. Metering for 347/600V, Three Phase four-wire circuits with more than one metering point per service entrance may use self-contained metering up to 200A on the load side of the Customer's service entrance (see the Electrical Safety Code).

### 3.3 Sub-Transmission

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This Rate class applies to:

1. LDCs receiving supply from Hydro One Distribution assets, where Hydro One is the Host Distributor to the LDC.
2. Customers taking load that is:
  - (i) Three Phase;
  - (ii) greater than 500 kW (monthly measured maximum (peak) demand averaged over the most recent calendar year, or with forecasted monthly average demand greater than 500 kW over twelve consecutive months);  
and
  - (iii) directly connected to, and supplied from, Hydro One distribution assets between 44 kV and 13.8 kV (the meaning of 'directly' includes Hydro One not owning or responsible for the local transformation).

For billing and annual monitoring of electricity usage for Sub-Transmission Customers, refer to [section 2.4.4](#).

#### 3.3.1 Connection and Upgrade Charges

Sub-Transmission Customers who make a written request for a Connection and whose Building Lies Along Hydro One's existing distribution lines must pay Hydro One Connection charges in accordance with [section 2.1.1](#).

Sub-Transmission Customers who make a written request for a Connection and whose building is within Hydro One's service area must also pay Hydro One Connection charges in accordance with [section 2.1.2](#).

Sub-Transmission Customers who request a service upgrade at their premises will pay Hydro One the costs associated with the upgrading the Connection Assets, with the exception of standard metering. If Expansion of the Distribution System is required to accommodate the upgrade, all costs associated with the upgrade will be treated in accordance with [section 2.1.2](#).

#### 3.3.2 Ownership Demarcation Point and Operational Demarcation Point

For Sub-Transmission Customers, excluding Embedded Distributors, the Ownership Demarcation Point will be located at the line switch primary live line clamp, or as specified in the Connection Agreement.

For Customers who own a primary disconnecting device, this device will serve as the Operational Demarcation Point and be under the operating control of Hydro One.

For other Customers excluding Embedded Distributors and Generators, who were moved to the Sub-Transmission rate class from another rate class, the Ownership Demarcation Point and Operational Demarcation Point will be located as follows:

1. at the first operating device along the tap to the Customer, if the first operating device is less than 200 metres from the line tap and does not cross a third party's property.  
Otherwise;
2. Hydro One will install, at its cost, an Ownership Demarcation Point as close as reasonably possible to the property line; if necessary the Customer will install an Operational Demarcation Point to meet Electrical Safety Authority (ESA) requirements.

## SECTION 3 – CUSTOMER CLASS SPECIFIC

### 3.3 Sub-Transmission

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If there is no operating device, Hydro One will install one as close as reasonably possible to the Ownership Demarcation Point (property line) or any Demarcation Point that the Customer may have agreed to with a third-party).

Sub-Transmission Customers who are Embedded Distributors should refer to [section 3.6](#).

#### 3.3.3 Voltage

Customers must consult with Hydro One early on to confirm availability of specific voltages within the Hydro One Distribution System.

For Sub-Transmission Customers, Hydro One supplies Three Phase electricity at the following nominal phase-to-phase voltages, where available:

1. 44,000V – Three Phase three-wire
2. 27,600V – Three Phase four-wire
3. 25,000V – Three Phase four-wire
4. 13,800V – Three Phase four-wire.

In some cases, Hydro One supplies Embedded Distributors with electricity at below 13,800V.

#### 3.3.4 Metering

Meter Installations for Sub-Transmission Customers are as described below, or as outlined in the Connection Agreement.

Where the monthly average peak demand for the calendar year is forecast by Hydro One to exceed 500 kW and the rating of the Customer's main disconnect device does not exceed 3000A at low voltage, transformer-type Meter Installations require an Interval Meter and will be provided with:

1. an acceptable meter enclosure;
2. an indoor instrument transformer enclosure if secondary metered;
3. a 31 mm conduit from the instrument transformer enclosure to the meter enclosure;
4. if requested by Hydro One, a voice-grade direct access telephone line that is active 24 hours a day, seven days a week, and is protected by a 13 mm conduit from the telephone entrance equipment into the meter enclosure; and
5. Prior to the Interval Meter installation, the Customer must provide a half-inch conduit complete with fish tape that runs from the Customer's telephone room to the network interface device (NID) located near the metering cabinet, if applicable.

Hydro One determines primary metering requirements on an individual basis.

### 3.4 Embedded Generation Facilities

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Embedded Generators are solely responsible for all commercial arrangements entered into with the IESO concerning their Embedded Generation Facility, including the IESO contract application process and contract administration.

Embedded Generators must ensure that their Embedded Generation Facility meets the technical requirements specified in Appendix F.2 of the Distribution System Code, the Electrical Safety Code and the Technical Interconnection Requirements (TIR) (including any Hydro One (TIR) updates in the form of bulletins and/or amendments).

If there is a conflict between the Technical Interconnection Requirements and these Conditions of Service, the Technical Interconnection Requirements will take precedence.

If there is a conflict between the Technical Interconnection Requirements and the technical requirements in [Appendix F.2](#) of the Distribution Code, Appendix F.2 will take precedence.

Embedded Generation Facilities also include Net Metered Generation Facilities.

The net metering arrangement option (see [Ontario Regulation 541/05](#) for additional details) is available to Customers wanting to install embedded generation provided that the Hydro One Distribution System can support the maximum cumulative output capacity of the Embedded Generation Facility equipment to be connected.

The location of revenue meters and the location of instrument transformer(s), if applicable, are subject to Hydro One's discretion and approval.

#### 3.4.1 Technical Requirements - Equipment Deemed Compliant

Embedded Generation Facility equipment connected and operating before May 1, 2002 is deemed to be compliant with all relevant technical requirements. Embedded Generators must comply with the Electrical Safety Code and are required to have an isolating device (see Appendix E).

Hydro One may require Embedded Generators to bring equipment deemed compliant into actual compliance with all relevant technical requirements within a reasonable time period specified by Hydro One but not longer than 12 months, if in Hydro One's opinion there is:

1. a material deterioration in the Distribution System's reliability resulting from the performance of the Generator's equipment
2. a material negative impact on the quality of power of an existing or new Customer resulting from the performance of the Generator's equipment
3. a material increase in generator capacity at the site where the equipment deemed compliant is located.



## SECTION 3 – CUSTOMER CLASS SPECIFIC

### 3.4 Embedded Generation Facilities

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#### 3.4.2 Size Categories

The Distribution System Code categorizes Embedded Generation Facilities differently depending on their nameplate rated capacity as outlined below:

| <b>Embedded Generation Facility Classification</b>                   | <b>Name-plate Rated Capacity</b>  |
|--|---|
| <b>Micro-Embedded Generation Facility</b>                            | 10 kW or less   |
| <b>Capacity Allocation Exempt Small Embedded Generation Facility</b> | (a) 250 kW or less connected to a less than 15 kV line; and<br>(b) 500 kW or less connected to a 15 kV or greater line;<br>(c) does not include a micro-Embedded Generation Facility. |
| <b>Small Embedded Generation Facility</b>                            | (a) 500 kW or less connected to a less than 15 kV line; and<br>(b) 1 MW or less connected to a 15 kV or greater line;<br>(c) does not include a Micro-Embedded Generation Facility.   |
| <b>Mid-sized Embedded Generation Facility</b>                        | Name-plate rated capacity of 10 MW or less and:<br>(a) more than 500 kW connected to a less than 15 kV line; and<br>(b) more than 1 MW connected to a 15 kV or greater line.          |
| <b>Large Embedded Generation Facility</b>                            | Greater than 10 MW  |

#### 3.4.3 Connection Process

This section does not apply to Emergency Backup Generation Facilities, Energy Storage Facilities or Load Displacement Generation Facilities. For information about the connection process for these facilities, see [section 2.3.6](#).

Embedded Generators are responsible for fulfilling their obligations in a timely manner including paying for impact assessments, executing Connection Cost Agreements and correcting any default of terms in their Connection Cost Agreement. This will enable Hydro One to meet its responsibilities as a Distributor specified in the Distribution System Code. With respect to timelines, Hydro One's obligations begin only after it receives all information required from the Generator. Embedded Generators who fail to meet their obligations within the timelines specified by Hydro One may experience processing delays, or more critically, the removal of their capacity allocation as per the Distribution System Code Section 6.2.4.1e.

### 3.4 Embedded Generation Facilities

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Regardless of their size, all proposed Embedded Generation Facilities must be assessed to ensure there are no system constraints and that capacity is available. Hydro One may, at its discretion, refuse to connect an Embedded Generation Facility for any of the reasons noted in [Section 3.1.1](#) of the Distribution System Code or [section 2.1.3](#) of these Conditions of Service.

If Hydro One has refused to connect a proposed Embedded Generation Facility for reasons that are within the Generator's control, Generators must address Hydro One's concerns to Hydro One's satisfaction before seeking a re-assessment. If Hydro One has refused to connect an Embedded Generation Facility for reasons that are beyond the Generator's control, including lack of capacity and system constraints, the Generator must reapply to connect if the capacity becomes available in the future or the system condition is remedied after Hydro One's refusal to connect.

For Hydro One's Embedded Generation Connection Process and requirements of Generators, see Appendix E of these Conditions of Service or [www.HydroOne.com](http://www.HydroOne.com). For additional details regarding the Connection process of Embedded Generation Facilities, please refer to the Distribution System Code.

#### 3.4.4 Connection Agreements

Hydro One requires all Embedded Generators with Embedded Generation Facilities connected to the Distribution System, and all Embedded Generators wishing to connect an Embedded Generation Facility to the Distribution System, to sign a Connection Agreement (applicable forms prescribed in [Appendix E](#) of the Distribution System Code and/or such other agreements described in the Appendix E section entitled 'Other Potential Contracts' as may be reasonably required by Hydro One).

Where two or more Embedded Generation Facilities are being connected to the Hydro One Distribution System at the same Point of Common Coupling, Hydro One will execute only one Connection Agreement with them, and the Embedded Generators will be liable to Hydro One on a joint and severally basis.

Embedded Generators whose Embedded Generation Facilities are connected to the Distribution System but who have not executed a Connection Agreement with Hydro One must do so within a reasonable period of time, unless they have some other agreement with Hydro One.

Until a Connection Agreement is executed by Hydro One and the Embedded Generator, Embedded Generators are deemed to have an implied contract with Hydro One. The terms of the implied contract are embedded in these Conditions of Service, the Electricity Distribution Rate Handbook, Hydro One's Rate schedules, the Licence, the Distribution System Code and the Retail Settlement Code.

Hydro One may disconnect Embedded Generation Facilities where the Embedded Generator has not executed a Connection Agreement (see [section 2.2](#)).

#### 3.4.5 General Operating Principles, Responsibility for Damages and Consequences of Excess Generation Output

In addition to meeting the requirements of their Connection Agreements, all Embedded Generators are responsible for operating their Embedded Generation Facilities in a manner that does not materially adversely affect:

1. the safety, reliability and efficiency of Hydro One's Distribution System; or
2. the quality of Distribution Services received by existing Customers, in accordance with [Sections 3.1.1](#) and [6.2.25](#) of the Distribution System Code.

### 3.4 Embedded Generation Facilities

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Notwithstanding [section 1.9](#) of these Conditions of Service, if damage to the Distribution System, or increased operating costs, result from the Connection of an Embedded Generation Facility (other than a Micro-Embedded Generation Facility), the Embedded Generators will reimburse Hydro One for these costs, in accordance with [Section 6.2.26](#) of the Distribution System Code.

Embedded Generation Facilities must not generate electricity at an amount greater than the capacity allocated to them in the Connection Impact Assessment (CIA) and/or identified as either the maximum Permissible Active Power Delivery amount or the Maximum Permissible Amount for Delivery in the Connection Agreement. Generation output is subject to review by Hydro One; and delivering excess generation qualifies as material breach of the Connection Agreement and these Conditions of Service.

#### 3.4.6 Maintenance Schedules

##### A. Embedded Generation Facilities with a name-plate rated capacity greater than 10 kW

Embedded Generation Facilities with a nameplate rated capacity greater than 10 kW must implement and adhere to a regular scheduled maintenance plan to ensure that connection devices, protection systems and control systems are maintained in good working order. The maintenance plan is outlined in the Connection Agreement or the Technical Interconnection Requirements, including any Hydro One TIR updates in the form of bulletins and/or amendments. Embedded Generators must perform a re-verification of their connection devices, protection systems and control systems at least every 48 months (or as specified in the Connection Agreement). A written report of the maintenance activities performed signed by a professional licensed engineer must be provided to Hydro One. Embedded Generators must keep copies of their verification reports and provide them to Hydro One upon request.

At its discretion, Hydro One may require Embedded Generators to allow Hydro One to witness the re-verification of any connection devices, protection systems and control systems that could adversely affect the Distribution System. Embedded Generators are responsible for any re-verification costs and must provide Hydro One with a copy of the report that describes the results of the re-verification in detail.

##### B. Micro-Embedded Generation Facilities

Maintenance schedules for Micro-Embedded Generation Facilities are outlined in the Connection Agreement and/or in the Technical Interconnection Requirements.

#### 3.4.7 Reporting Requirements

Embedded Generators must meet the reporting requirements specified in the Technical Interconnection Requirements, including any Hydro One TIR updates in the form of bulletins and/or amendments.

#### 3.4.8 Post-Connection Changes

Embedded Generators intending to make any one of the following changes to their existing Embedded Generation Facility must submit a new Connection application to Hydro One:

1. Increase their Embedded Generation Facility's output beyond the capacity allocated to it upon completion of the Connection Impact Assessment and/or identified in the Connection Agreement;
2. Change their mode of operation; and/or
3. Change their protective devices.

### 3.4 Embedded Generation Facilities

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Hydro One will adhere to rules prescribed in [Sections 6.2.9](#) through [6.2.24](#) of the Distribution System Code in processing the new Connection application. The work, including any required impact assessments, required to be performed to enable the change made by the Embedded Generation will be at the Embedded Generators' expense.

#### 3.4.9 Disconnection of an Embedded Generation Facility

Embedded Generators must discontinue their Embedded Generation Facility's operation, and Hydro One may isolate or Disconnect the facility from the Distribution System if, in Hydro One's sole opinion, any of the following conditions exist:

1. there is a material deterioration in Distribution System reliability resulting from the performance of the Embedded Generation Facility's equipment;
2. there is a material negative impact to the quality of power of an existing or a new Customer resulting from the performance of the Embedded Generation Facility's equipment;
3. the Embedded Generator has failed to reverify the facility's protection and control systems every 48 months, or as specified in the Connection Agreement, or failed to submit the report to Hydro One within 30 days;
4. the Embedded Generator's re-verification report shows deficiencies that are unacceptable to Hydro One;
5. the Embedded Generator has made material changes to either the Embedded Generation Facility's capacity mode of operation, or protective devices, without obtaining Hydro One's prior written consent;
6. the Embedded Generation Facility does not meet one or more of the technical requirements specified in [Appendix F.2](#) of the Distribution System Code, or in the Technical Interconnection Requirements, including any Hydro One TIR updates in the form of bulletins and/or amendments;
7. the Embedded Generator has failed to promptly provide Hydro One with the documentation requested as part of the application and assessment process;
8. the Embedded Generator has failed to promptly provide Hydro One with power quality information equipment status information or any other equipment information, as requested by Hydro One and there is a material deterioration of the Distribution System that may be related to the operation of the Embedded Generator's Facility; or
9. the Embedded Generator has not ceased generating electricity at an amount greater than the capacity allocated to it upon the completion of the Connection Impact Assessment and/or identified in the Connection Agreement as either the Maximum Permissible Active Power Delivery Amount or the Maximum Permissible Amount for Delivery (kW), within 15 days after being notified in writing of the excess generation by Hydro One.

If an Embedded Generation Facility is Disconnected for any of the reasons above, reconnection will only be allowed under the conditions outlined in [section 2.2.6](#) of these Conditions of Service.

#### 3.4.10 Default Cure Periods - Form of Connection Agreement for Small Embedded Generation Facility or a Mid-Sized Embedded Generation Facility

The Cure Periods for defaults (see [Section 19.4](#) in the Form of Connection Agreement for further details) are as follows:

1. for Financial Defaults, ten business days after the date that Hydro One provides the Embedded Generator with written notice of the Financial Default.
2. for Non-financial Defaults, in accordance with the following chart or 30 business days:

## SECTION 3 – CUSTOMER CLASS SPECIFIC

### 3.4 Embedded Generation Facilities

| Impact of Default   | Description   | Cure Period |
|---|---|-------------|
| Safety - Immediate  | A Non-financial Default that could result in immediate injury or loss of life (e.g., exposed wires, destroyed station fence, etc.)  | Promptly    |
| Safety - Potential  | A Non-financial Default that could result in injury or loss of life if a single contingency were to occur (e.g., substandard grounding)   | Promptly    |
| Asset Integrity   | A Non-financial Default that could adversely affect the ability of an asset to operate within prescribed ratings (voltage, thermal, short circuit), or be maintained to required standards for the purpose of prolonging the lifespan of the asset or satisfying safety or environmental requirements   | Promptly    |
| Environment - Immediate   | A Non-financial Default that could result in immediate adverse effects on land, air, water, plants or animals   | Promptly    |
| Environmental - Potential   | A Non-financial Default that could, if a single contingency were to occur, result in adverse effects on land, air, water, plants or animals   | 30 days     |
| Power Quality Immediate   | A Non-financial Default that results in (a) a material adverse effect in the provision and quality of Distribution Services received by other Customers or (b) a variation in electric power service that is likely to cause the failure or improper/defective operation of end-use equipment, such as voltage sag, overvoltage, transients, harmonic distortion and electrical noise   | Promptly    |
| Power Quality Potential   | A Non-financial Default that could result In: (a) an adverse effect on the provision and quality of Distribution Services received by other Customers or (b) a variation in electric power service that Customers find objectionable and could potentially cause a failure or improper/defective operation of end-use equipment, such as voltage sag, overvoltage, other transient events, harmonic distortion and electrical noise | 30 days     |
| Under or not insured; Failure to provide evidence of Acceptable Insurance | Failure to provide evidence of carriage of, or failure to carry, commercial general liability insurance for third-party bodily injury, personal injury and property damage in the amount identified in section 9.1 of the Connection Agreement  | 10 days     |
| Over-generation   | Failure to cease generating electricity in excess of the capacity allocated upon the completion of the Connection Impact Assessment and/or identified as either the Maximum Permissible Active Power Delivery Amount or the Maximum Permissible Amount for Delivery (kW) in the Connection Agreement  | 15 days     |

If Non-financial Defaults have more than one impact, and the impacts have different Cure Periods, the shortest Cure Period will apply. Unless Hydro One is found at fault, any remedial work will be performed at the Embedded Generator's expense.

### 3.4 Embedded Generation Facilities

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#### 3.4.11 Rates and Settlement

##### A. MicroFIT Generator Rate Classification

The MicroFIT Generator Rate classification is a separate Rate classification and tariff that applies to Embedded Generation Facilities with an IESO MicroFIT contract.

##### B. Distributed Generation Rate Classification

Any Embedded Generation Facility with a name-plate capacity greater than 10 kW or that does not classified in the MicroFIT generator Rate classification will be classified under the Distributed Generation Rate classification. This Rate classification is used for Embedded Generation Facilities whose associated load (i.e. station service) is supplied through a single point of Connection to the Distribution System.

This classification does not apply to Load Displacement Embedded Generation Facilities.

##### C. Distributors' Right to Deduct

Power purchase payments are made by Hydro One to Embedded Generators as required by the Retail Settlement Code. Hydro One has the right to deduct from these payments any amounts owing to Hydro One by the Generator, including, but not limited to, charges for Standard Supply Service.

##### D. Electronic Funds Transfer (EFT)

Payments for power purchases will only be made via electronic funds transfer in Canadian funds to a Canadian banking institution. All amounts will be made payable to the Generator unless the Generator provides a written direction of funds instructing otherwise.

## SECTION 3 – CUSTOMER CLASS SPECIFIC

### 3.5 Embedded Wholesale Market Participants

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An Embedded Wholesale Market Participant is a Customer who is registered as a Wholesale Market Participant with the IESO and whose facility is not directly connected to the IESO Controlled Grid but is connected to the Distribution System.

Once approved by the IESO, Embedded Wholesale Market Participants within Hydro One's service jurisdiction have 60 days to notify Hydro One in writing of their approved status prior to participating in the IESO-administered market.

Embedded Wholesale Market Participants are required to enter into Connection Agreements with Hydro One and provide all required operating schedules.

Embedded Wholesale Market Participants are responsible for the ownership, installation and maintenance of the meter, as well as for contracting the services of a Registered Meter Service Provider.

#### **3.5.1 Embedded Market Participant Generators**

Embedded Generators that are Market Participant Generators in the IESO-administered market must meet or exceed all IESO metering requirements and provide Hydro One with the technical details of their Meter Installations.

An Embedded Market Participant Generator who transfers to the retail market must provide Four-Quadrant Interval Metering that complies with the requirements of the Distribution System Code and any Hydro One metering standards.

## SECTION 3 – CUSTOMER CLASS SPECIFIC

### 3.6 Embedded Distributors

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The reliability of supply, and the voltage level at the delivery point from the Distribution System to an Embedded Distributor's Distribution System, must be equal to, or greater than what Hydro One provides to its other Distribution Customers.

Hydro One will make reasonable efforts to respond promptly to an Embedded Distributor's written request for Connection to the Distribution System and will comply with the requirements of Connection identified in [Section 6.3](#) of the Distribution System Code.

On occasion, a Distributor may wish to connect to Hydro One's Distribution System for the purposes of obtaining additional transmission connection capacity. In such cases, Hydro One will follow the approval process for such connections required by Section 3.1.8 of the Distribution System Code. See Appendix C of these Conditions of Service or [www.HydroOne.com](http://www.HydroOne.com) for additional information and details regarding Hydro One's process for responding to connection-related requests from Embedded Distributors.



### 3.7 Unmetered Connections

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Electrical service to Connections that draw a small and uniform electrical load can be provided without metering. Hydro One reserves the right to review Customers' eligibility for unmetered service, and to determine whether to allow an unmetered connection, or require that a meter be installed.

Unmetered Connections include cable TV amplifiers, telephone switching devices, phone booths, bus shelters, rail way crossing signals, and traffic signals. Only loads of less than 5 kW can be set up as unmetered Connections. Unmetered Customers must provide detailed manufacturer information and documentation regarding the electrical demand or consumption of the proposed Unmetered Load. A load study that is acceptable to Hydro One may be required in order to confirm load and usage.

Unmetered Connections are not intended for Customers with facilities that generate and deliver electricity into Hydro One's Distribution System. If an unmetered Customer has generation facilities, the connection must meet Hydro One's technical specification for Emergency Backup Generation Facilities, Load Displacement Generation Facilities and Energy Storage Facilities, as applicable (see [section 2.3.6](#)).

#### 3.7.1 General Conditions for Unmetered Connections

Hydro One has a fiduciary responsibility to all Customers to ensure that good processes are established and followed. There are reciprocal obligations and responsibilities that must be met by both Hydro One and any Customer with an unmetered Connection.

At Hydro One's discretion, it may be necessary to execute an agreement that clearly identifies the unmetered Customer's obligations and responsibilities to notify Hydro One of changes to existing or new equipment or of new Connections by the unmetered Customer.

Where unmetered Customers wish to affix their attachments to a Hydro One asset, the method of attachment and their location is subject to Hydro One's approval and Customers must enter into an additional Customer-specific joint-use agreement.

Unmetered Connections are billed based on estimated usage.

All unmetered Connections fall under the Unmetered Load or lighting Rate classifications.

#### 3.7.2 Unmetered Load Types Defined

The method for determining the location of Supply Points may vary for each unmetered service connection application and shall be established based on consultation with Hydro One.

The following sections describe the types of unmetered service connections and the specific requirements applicable to each type.

##### A. Street Lighting

This section pertains to the distribution and supply of electrical energy for street lighting. Street lights are devices owned by or operated for the road authority and/or the municipal corporation.

The energy consumption for street lights is estimated based on Hydro One's profile for street lighting load, which provides the amount of time each month that the street lights are operating. The energy charge is based on installed load.

Street lighting plant, facilities, or equipment owned by the unmetered Customer are subject to the requirements of the Electrical Safety Authority.

## SECTION 3 – CUSTOMER CLASS SPECIFIC

### 3.7 Unmetered Connections

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The unmetered Customer is responsible for paying the Estimated Cost of the work related to the connection of Street Lighting performed by Hydro One.

Where streetlights are attached to Hydro One's line poles, the owner of the streetlights must enter into an agreement to use such poles. The location and method of attachment is subject to Hydro One approval. Hydro One will make the electrical service connection of all streetlights to the Distribution System. The normal service voltage will be 120/240 volts, single-phase, three-wire.

The unmetered Customer will provide the secondary conductor to the supply point. Hydro One will install and connect the service conductor at the supply point.

#### **B. Sentinel Lighting**

This section pertains to the distribution and supply of electrical energy for sentinel lighting.

The energy consumption for sentinel lights is estimated based on Hydro One's profile for street lighting load, which provides the amount of time each month that the street lights are operating. The energy charge is based on installed load.

Sentinel lighting plant, facilities, or equipment owned by the customer are subject to Electrical Safety Authority requirements.

As required by the OEB, Sentinel light service is limited to existing customers already in the rental program and to existing sentinel lights only.

#### **C Telecommunication Power Supplies**

This section pertains to the distribution and supply of electricity for cablevision power units. The standard service with no accessories (heaters or air conditioners, etc.) can be unmetered. If a load study is not received, the account will be set up on full name plate rating. Energy consumption will be based on connected wattage on the line side power supply and based on 24 hours of use.

Power units that have additional accessories such as heaters or air conditioners, etc. shall require metering.

Each power supply will be set up as an individual account.

The service voltage will be 120 volts, single phase, two wire, maximum 15 amp.

The method and location of supply will vary and will be established for each application through consultation with Hydro One.

#### **D. Traffic Signals**

This section pertains to the distribution and supply of electrical energy for traffic signals and crosswalks. These are the devices owned and maintained by the road authority and/or the municipal corporation.

The service may be unmetered for small intersections, while larger loads may require metering. Energy consumption will be based on the connected wattage and the calculated hours of use.

The service voltage will be 120/240 volts, single phase, three wire.

The method and location of the supply will vary and will be established for each application through consultation with Hydro One.

The unmetered Customer will provide the secondary conductor to the supply point. Hydro One will install and connect the service conductor at the supply point.

### 3.7 Unmetered Connections

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#### **E. Decorative Lighting**

This section pertains to the distribution and supply of electricity for decorative street lighting installations. Such installations, which include lighting for festive occasions or streetscaping, are privately owned and maintained and subject to Electrical Safety Authority and Hydro One service conditions.

This section does not apply to street lighting that is owned by or operated by the road authority and/or the municipal corporation.

Hydro One shall determine whether metering is required on a case-by-case basis by considering the demand, load profile, location, accessibility, duration of the Connection, and municipal agreement.

The nominal service voltage will be 120/240 volts, Single Phase.

The method and location of the supply will vary and will be established for each application through consultation with Hydro One.

Charges for part time or decorative seasonal lighting include an energy charge calculated at dollars/kWh/month. Minimum billing will be for one month (Dollars per kWh x # of fixtures x kWh).

#### **F. Other Small Services**

Telephone booths, small power supplies, communication amplifiers and antennas, road and utility cathodic protection, railway signals, flasher beacons, and similar small unmetered Customer loads within the public road right-of-way may qualify for treatment as an Unmetered Load.

#### **3.7.2 Unmetered Load Connection Requirements**

See Appendix D of these Conditions of Service or [www.HydroOne.com](http://www.HydroOne.com) for a complete overview of the Connection requirements for Unmetered Loads.

## SECTION 4 – GLOSSARY OF TERMS

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**“Acquired Customer”** means a Customer formerly supplied by assets that were formerly owned by a Distributor other than Hydro One and those assets were acquired by and are now owned and operated by Hydro One and as such the Customer is now supplied by Hydro One.

**“Acquired Distributor”** means a Distributor whose Distribution System or portion of their Distribution System was acquired by and is now owned and operated by Hydro One.

**“Acquired Facilities and Equipment”** means Meter Installation(s), wires, poles, cables, transformers, any other structures, equipment, all other appliances and equipment or other things used for distributing electricity, that were formerly owned by another Distributor that that are now owned by Hydro One.

**“Actual Cost”** means Hydro One’s charge for equipment, labour and materials at Hydro One’s standard rates plus Hydro One’s standard overheads and interest thereon;

**“Applicable Laws”** means any and all Applicable Laws, including environmental laws, statutes, codes, licensing requirements, treaties, directives, rules, regulations, protocols, policies, by-laws, orders, injunctions, rulings, awards, judgments, or decree or any requirements or decision or agreement with or by any government or government department, commission, board, court authority or agency;

**“Affiliate Relationships Code”** means the code issued by the OEB 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;

**“Basic Connection”** means a portion of a Customer Connection, the cost of which, Hydro One will not charge the Customer, but rather, will recover through its revenue requirement, as specified in the Distribution System Code, Sections 3.1.4 and 3.1.5. The components of Hydro One’s Basic Connection are listed in Section 2.1.1 of these Conditions of Service.

**“Billing Cycle Factor”** means a factor applied to a bill amount in order to normalize to the length of the bill period plus 45 days for the purposes of calculating security deposit requirements, i.e., a monthly bill is adjusted by a Billing Cycle Factor of 2.5 and a quarterly bill is adjusted by a Billing Cycle Factor of 1.50;

**“Building that Lies Along”** means a Customer property or parcel of land that is directly adjacent to or abuts onto the public road allowance where Hydro One has Hydro One Facilities and Equipment of the appropriate voltage and capacity;

**“Capital Cost Recovery Agreement (CCRA)”** formerly known as a “Connection Cost Recovery Agreement and means an agreement entered into between Hydro One and a person connected to its Distribution System that describes the work to be performed by Hydro One in connecting the Customer, the cost of same, any required capital contributions and/or revenue guarantees;

**“Combination Meter/Breaker Unit”** means a meter box that contains both a meter and a breaker unit;

**“Common Line”** means that portion of a line on Private Property that is owned by Hydro One and is used to serve more than one Customer;

**“Complex Metering Installation”** means a Metering Installation where instrument transformers, test blocks, recorders, pulse duplicators and multiple meters may be employed;

**“Connection”** means the process of installing and activating Connection Assets in order to distribute electricity to a Customer;

**“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 the main Distribution System and the Ownership Demarcation Point with that Customer;

**“Connection Agreement”** means the agreement entered into between Hydro One and a person whose Customer Equipment is or is to be connected to the Distribution System that delineates the conditions of the Connection and delivery of electricity to or from that Connection;

**“Connection Cost Agreement”** means an agreement made between Hydro One and a Generator in relation to the Connection of a Small Embedded Generation Facility, a Mid-Sized Embedded Generation Facility or a Large Embedded Generation to the Distribution System as referred to in Section 6.2.18 of the Distribution System Code;

**“CT”** refers to Current Transformer

**“Cure Period”** means the period of time given to a Defaulting Party for the purposes of remedying an Event of Default under a Connection Agreement;

**“Customer”** means a person that has contracted for or intends to contract for connection of a building or an Embedded Generation Facility. Customer also includes developers of residential or commercial subdivisions and any person who uses electricity delivered by Hydro One (for the purposes of Sections 2.1.2, 2.1.5, 2.1.8, 2.1.9, 2.1.10, and 3.7 of these Conditions of Service, other distributors, whether embedded in Hydro One’s service territory or not, are deemed customers of Hydro One

**“Customer Equipment”** means all electrical and mechanical equipment owned by the Customer which is used by the Customer to supply the Customer’s home or business and does not include any Hydro One Facilities and Equipment. Customer Equipment includes the base of the meter and Primary Service and Secondary Service supports and civil works located on the Customer’s property. Customer Equipment also includes any Customer-owned transformers and conductor.

**“Customer Connection Horizon”** means five years calculated from the energization date of the Expansion facilities.

**“Demand Billed Customer”** means a non-residential Customer with average monthly peak demand equal to or greater than 50 kW over a historical period up to 36 months that is read and billed monthly on kW demand or 90% of kVA as well as kWh energy;

**“Demand Meter”** means a meter that measures a Customer’s peak usage during a specified period of time;

**“Disconnect”** or **“Disconnection”** means a deactivation of Connection Assets that result in cessation of Distribution Services to a Customer;

**“Disconnect/Collect Trip”** is a visit to a Customer’s premises by an employee or agent of Hydro One to demand payment of an outstanding amount or to shut off or limit distribution of electricity to the Customer failing payment;

**“Distribute”** or **“Distribution”** with respect to electricity, means to convey electricity at voltages of 50 kV or less;

**“Distribution Facility”** means all distribution electrical equipment and systems associated with delivering electrical power from a transmission connection facility to one or more distribution end-use Customers. A Distribution Facility normally includes a distribution feeder and may include a distribution station, as well as a secondary distribution feeder. Voltage regulating devices, overcurrent protection devices, and metering equipment are all examples of equipment that are typically also included as part of a Distribution Facility. Any reference to a Distribution Facility in these Conditions of Service means a Hydro One–owned Distribution Facility, unless otherwise noted.

**“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”** means the factor(s) by which metered loads must be multiplied such that when summed it equals the total measured load at the supply point(s) to the Distribution System;

**“Distribution Services”** means services related to the distribution of electricity and the services the OEB has required Distributors to carry out, for which a charge or Rate has been approved by the OEB under Section 78 of the *Ontario Energy Board Act*;

**“Distribution Standards”** means Hydro One’s distribution standards;

**“Distribution System”** means Hydro One’s system for distributing electricity, and includes any structures, equipment or other things used for that purpose. The Distribution System comprises 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, issued by the OEB, 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, other Distributors and Retailers and provides minimum technical operating standards of Distribution Systems;

**“Distributor”** means a person who owns or operates a Distribution System;

**“Distributor Consolidated Billing”** is as described in the Retail Settlement Code;

**“Electricity Act”** means the *Electricity Act, 1998*, being Schedule A to the *Energy Competition Act*, S.O. 1998, c. 15, as amended;

**“Electricity Distribution Rate Handbook”** means the document issued by the OEB that outlines the regulatory mechanisms that will be applied in the setting of Distributor’s Rates;

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

**“Electrical Safety Code”** means the code referred to in O. Reg 164/99, as amended;

**“Electricity System”** means the integrated power system and all facilities Connected to that system;

**“Eligible Low-Income Customer”** means, effective October 1, 2011:

- (a) a residential Customer who has a pre-tax household income at or below the pre-tax Low Income Cut-Off, according to Statistics Canada, plus 15%, taking into account family size and community size, as qualified by a social service agency or government agency; or
- (b) a Customer who has been qualified for any OEB-approved Emergency financial assistance program made available by Hydro One for Eligible Low-Income Customer,

and said Customer shall remain an Eligible Low-Income Customer for a period of two years from the date on which the Customer first qualified as an Eligible Low-Income Customer.

**“Embedded Distributor”** or **“Embedded LDC”** means a Distributor that is provided electricity by the Host Distributor. In these Conditions of Service, an Embedded Distributor or Embedded LDC may or may not be a Wholesale Market Participant;

**“Embedded Generator”** means a Generator whose Generation Facility is connected to the Distribution System;

**“Embedded Generation Facility”** means a Generation Facility which is not directly connected to the IESO-controlled Grid but instead is connected to a Distribution System and has the extended meaning given to it in Section 1.9 of the Distribution System Code;

**“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 the Distribution System;

**“End of Life”** means the state where:

1. (a) the original in-service capabilities of equipment have been (or are expected to be) substantially diminished, and  
(b) the cost of restoring or purchasing equipment to achieve the original in-service capabilities exceeds the cost of other viable alternatives, or
2. new physical requirements exceed the original in-service capabilities of the equipment.

**“Energy Meter”** means a meter that measures a Customer’s energy consumption

**“Energy Only Billed Customer”** means any Customer with average monthly peak demand of less than 50 kW over a historical period up to 36 months that is billed for electricity service on kWh energy only;

**“Energy Storage Facility”** means a device or facility that accumulates energy for some useful operation at a later time and is connected to the Distribution System;

**“Event of Default”** means a Financial Default or a Non-financial Default;

**“Expansion”** is a situation in which Hydro One needs to construct new facilities to its main Distribution System or increase the capacity of existing Hydro One Facilities and Equipment of its main Distribution System in order to be able to connect or accommodate the increased capacity requirement(s) of one or more specific Customers;

**“Expansion Deposit”** means a deposit requested by Hydro One in accordance with the Distribution System Code to be paid by a Customer in respect of an Expansion that covers both the forecast risk (the risk associated with whether any projected revenue for the Expansion will materialize as forecasted) and the asset risk (the risk associated with ensuring that any work that is eligible for alternative bid when it is performed by the Customer, is constructed, that it is completed to the proper design and technical standards and specifications, and that the work eligible for alternative bid operates properly when energized) which shall not exceed:

- (a) 100% of the present value of any forecasted revenues where the Customer has to pay a capital contribution; and
- (b) 100% of the present value of the projected capital costs and on-going maintenance costs of the work that is not eligible for alternative bid and the work eligible for alternative bid facilities where the Customer does not have to pay a capital contribution;

**“Existing Park Facilities”** means Distribution Facilities that are owned by Hydro One and are within the park boundary;

**“Financial Default”** means a failure by a party to pay an amount to the other party to the Connection Agreement when due, including failure to pay compensation or indemnification for loss or damage as agreed by the parties or for amounts determined to be owed to a party as a result of the settlement or resolution of a dispute arising under a Connection Agreement;

**“Force Majeure Event”** In a situation reasonably beyond the control of the party whose inability to perform results from events including, without limitation, strike, lockout or other labour dispute of that party’s employees, damage or destruction by the elements, accident to the works of that party, fire, explosion, war, legal act of the public authorities, insurrection, Act of God or inability to obtain essential services or to transport materials, products or equipment because of the effect of similar causes on that party’s suppliers or carriers;

**“Four-Quadrant Interval Meter”** means an Interval Meter that records power injected into the Distribution System and the amount of electricity consumed by the Customer;

**“General Service”** means the Rate classifications applicable to any service that does not fit the description of Year-round Residential or Seasonal Residential, Sub-Transmission, Sentinel Lighting,

Street Lighting, MicroFIT Generation Facilities, and Embedded retail Generation Facility classes. Generally, it is composed of commercial, industrial, educational, administrative, auxiliary and government type services. It includes combination-type services where a variety of uses are made of the service by the owner of one property, and all multiple services except residential with up to four units;

**“Generate”** or **“Generating”**, 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 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;

**“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 judgment in light of the facts known at the time the decision was made, could have been expected to accomplish the desired result at a reasonable cost consistent with good 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;

**“Historical Capacity”** is defined in [section 2.1.9 C](#)

**“Host Distributor”** means the Distributor who provides electricity to an Embedded Distributor and for the purposes of these Conditions of Service, unless otherwise specified, means Hydro One;

**“Hydro One Facilities and Equipment”** means Hydro One’s Meter Installation(s), wires, poles, cables, transformers, any other structures, equipment, all other appliances and equipment or other things used for distributing electricity;

**“IESO”** means the Independent Electricity System Operator established under the *Electricity Act*;

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

**“Insolvency/Dissolution Event”** means any of the following in respect of a party, the making of an order or resolution for the winding up of the party or of its operations or the occurrence of any other dissolution or liquidation proceeding instituted by or against a party, including, but not limited to bankruptcy and insolvency;

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

**“kW”** refers to **Kilowatt**

**“kWh”** refers to **Kilowatt hour**

**“kVA”** refers to **Kilovolt amps**

**“Land Lease Community Home”** means any dwelling that is a permanent structure where the owner of the dwelling leases the land used or intended for use as the site for the dwelling, but does not include a Mobile Home;

**“Large Embedded Generation Facility”** means an Embedded Generation Facility with a name-plate capacity of more than 10 MW;

**“Load Displacement”** means in relation to a Generation Facility that is connected on the Customer side of the Ownership Demarcation Point, that the output of the Generation Facility is used or intended to be used exclusively for the Customer’s own consumption;



**“Load Displacement Generation Facility”** means an Embedded Generation Facility that is used exclusively for Load Displacement purposes at all times;

**“Load Controller”** is a device that will control the amount of power delivered to a premise. Load interrupters are also used to control the amount of power delivered. The load controlling devices are typically used during collection activity;

**“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;

**“Load Transfer Customer”** means a Customer that is provided Distribution Services through a Load Transfer;

**“Local Distribution Company”** or **“LDC”** means a Distributor licensed by the Ontario Energy Board;

**“Low Density Zone (R2)”** means an area other than an Urban or Medium Density Zone;

**“Market Participant”** means a person who is authorized by the Market Rules to participate in the IESO-administered markets or to cause or permit electricity to be conveyed into, through or out of the IESO-controlled grid;

**“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 (Canada)*;

**“Medium Density Zone (R1)”** means an area containing 100 or more Customers with a line density of at least 15 Customers per kilometer. All classes of Customers are included in the density count;

**“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, whether or not such equipment is located in the immediate vicinity of the meter and includes, where applicable, a Socket-Mounted Collector or a Pole-Mounted Collector, and including all other equipment required for the Meter Installation;

**“Metering Services”** means installation, testing, reading, and maintenance of meters;

**“Micro-Embedded Generation Facility”** means an Embedded Generation Facility with a name-plate rated capacity of 10 kW or less;

**“MicroFit Contract”** means an agreement made between the Ontario Power Authority and a Generator in respect of the feed-in tariff program for Micro- embedded Generation Facilities;

**“MicroFIT Generation Facility”** means a Micro-Embedded Generation Facility with a MicroFIT Contract;

**“Mid-Sized Embedded Generation Facility”** means an Embedded Generation Facility with a name-plate rated capacity of 10 MW or less 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;

**“Mobile Home”** means any dwelling that is designed to be made mobile, and constructed or manufactured to provide a permanent residence for one or more persons, but does not include a travel trailer, tent trailer or trailer otherwise designed;

**“Monthly Billing”** means a notional and approximate 30-day period for a billing cycle, not a calendar month;

**“Multiple Residential Properties”** means a property, which provides separate living accommodation for two or more families. It does not include properties used for short-term occupancy such as hotels, motels, etc.;

**“Net Metered Generation Facility”** means an Embedded Generation Facility that meets the requirements of O. Reg. 541/05 “Net Metering” made under the Ontario Energy Board Act;

**“Neutral Ground Resistor (NGR)”** means a resistor that has been installed between the transformer neutral and ground;

**“Non-financial Default”** means in respect of a party:

- (a) any breach of a Connection Agreement by that party, other than a breach that constitutes a Financial Default;
- (b) the licence (if any) of the party is suspended, withdrawn or revoked or expires without being replaced; or
- (c) an Insolvency/Dissolution Event occurs in relation to the party;

**“OEB”** means the Ontario Energy Board;

**“Ontario Energy Board Act”** means the *Ontario Energy Board Act, 1998*, being Schedule B to the *Energy Competition Act*, S.O. 1998. c. 15, as amended;

**“Operational Demarcation Point”** means the physical location at which Hydro One’s responsibility for operational control of distribution equipment, including Connection Assets ends at the Customer;

**“Ownership Demarcation Point”** means the physical location at which Hydro One’s ownership of distribution equipment, including Connection Assets ends at the Customer;

**“Personal Information”** means any factual or subjective information, recorded or not, about an identifiable individual and this includes information in any form such as: age, name, ID numbers, income, ethnic origin, or blood type, opinions, evaluations, comments, social status, or disciplinary actions. Personal Information does not include the name, title, business address or telephone of an employee of an organization;

**“Point of Common Coupling”** or **“PCC”** or **“Point of Supply”**, with respect to an Embedded Generation Facility, means the Connection point where electricity produced by the Embedded Generation Facility is injected into the Distribution System;

**“Pole-Mounted Collector”** means an advanced metering infrastructure device installed on a Customer-owned pole to support meter communications;

**“Present Value”** means the current value of a future amount of money;

**“Primary Metered Service”** means a Connection which is metered at the Hydro One primary distribution voltage;

**“Primary Service”** means a Connection directly to Hydro One’s primary facilities. The Customer owns all conductors, supports and civil works located on its property;

**“Private Property”** means any property owned by a Customer or a third party and does not include any public street or highway;

**“PT”** refers to **Potential Transformer**

**“Public Holidays”** mean the days designated by Hydro One from time to time. Until otherwise designated, including: New Year’s Day, Family Day, Labour Day, Good Friday, Thanksgiving Day, Easter Monday, Christmas Day, Victoria Day, Boxing Day, Canada (Dominion) Day, and the Civic Holiday (as celebrated in Toronto and various other places in Ontario);

**“Qualified Contractor”** means a contractor qualified to deal with electrical hazards in accordance with the requirements of the Occupational Health & Safety Act, (Ontario) as amended and all applicable regulations thereto including, Construction Projects – O. Reg. 213/91;

**“Quarterly Billing”** means a notional and approximate 90-day period for a billing cycle, not necessarily aligned with calendar months;

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

**“Refund Administration Service”** means the service offered prior to the Distribution System Code coming into force to new Customers requiring an Expansion for Connection to the Distribution System, as such Customers were required to pay all costs of the Expansion. For a fee, Hydro One monitored new Connections to the line, to collect from any new Customers connecting to the original Expansion a fair share of the original costs and to administer a refund to the original or contributor or the present property owner. This service was provided in 5-year terms and could be renewed for additional 5-year terms upon additional payments of the fee. Customers who did not opt for a Refund Administration Service were not eligible for rebates if new Customers were added to the original Expansion. Refund Administration Service is no longer offered to new Customers requiring Expansions for Connection;

**“Regulated Price Plan”** or **“RPP”** means the Rate plan established by the Ontario Energy Board for retailing of electricity to eligible Consumers, as defined by regulations made pursuant to the *Ontario Energy Board Act*. Regulated prices are established for tiered pricing or time-of-use pricing;

**“Registered Meter Service Provider”** means a Person that provides, installs, commissions, registers, maintains, repairs, replaces, inspects and tests Metering Installations and is approved and registered by Measurement Canada and the IESO;

**“Remote Disconnect Reconnect Meter”** means a Meter with the ability to be disconnected or reconnected remotely.

**“Renewable Energy Expansion Cost Cap”** has the meaning given to it in the Distribution System Code;

**“Renewable Energy Generation Facility”** has the meaning given to it in the *Ontario Energy Board Act*,

**“Renewable Enabling Improvement”** has the meaning given to it in the *Ontario Energy Board Act*,

**“Residential Customer”**

**Year-round Residential** – A year-round residential customer classification applies to a customer’s main place of abode and may include additional buildings served through the same meter, provided they are not rental income units. All of the following criteria must be met:

- a) Occupant represents and warrants to Hydro One Networks Inc. that for so long as he/she has year-round residential rate status for the identified dwelling, he/she will not designate another property that he/she owns as a year-round residence for purposes of Hydro One rate classification.
- b) Occupier must live in this residence for at least four (4) days of the week for eight (8) months of the year and the Occupier must not reside anywhere else for more than three (3) days a week during eight (8) months of the year.
- c) The address of this residence must appear on documents such as the occupant’s electric bill, driver’s licence, credit card invoice, property tax bill, etc.
- d) Occupants who are eligible to vote in Provincial or Federal elections must be enumerated for this purpose at the address of this residence.

**Seasonal Residential**– means the rate classification defined as any residential service that does not meet the residential year-round criteria. It includes dwellings such as cottages, chalets and camps.

“**Retail**”, with respect to electricity means,

- a) to sell or offer to sell electricity to a Customer;
- b) to act as agent or broker for a Retailer with respect to the sale or offering for sale of electricity;  
or
- c) to act or offer to act as an agent or broker for a Customer with respect to the sale or offering for sale of electricity;

“**Retail Settlement Code**” means the code issued by the OEB 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 Customer and provides for tracking and facilitating Customer transfers among competitive Retailers;

“**Retailer**” means a person who Retailers electricity;

“**Retailer Consolidated Billing**” is as described in the Retail Settlement Code;

“**Secondary Metered Service**” means a Connection whose meter point is located on the secondary side of a distribution transformer;

“**Secondary Service**” means a Connection to the low voltage side of Hydro One’s transformer located on the Distribution System. Hydro One may own the conductor and the Customer always owns all supports and civil works on the Customer’s property;

“**Service Transfer Request**” is as described in the Retail Settlement Code;

“**Single Phase**” means a system that supplies a single alternating current electricity supply;

“**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 1 MW or less in the case of facility connected to a 15 kV or greater line;

“**Smart Grid**” means the advanced information exchange systems and equipment described in subsection 1.3 of the *Electricity Act*;

“**Meter**” means a meter that is part of an advanced metering infrastructure that meets the functional specification referenced in the Criteria and Requirements for Meters and Metering Equipment, Systems and Technology Regulation, O. Reg. 425/06;

“**Metering Data**” means data derived from Meters, including data related to Customer’s consumption of electricity;

“**Smart Metering Entity**” or “**SME**” means the corporation incorporated, the limited partnership or the partnership formed or the entity designated pursuant to Section 53.7 of the *Electricity Act* to accomplish the government’s Smart Metering initiative;

“**Socket-Mounted Collector**” means an advanced metering infrastructure device installed in the Customer’s meter base to support meter communications;

“**Standard Offer Program (SOP)**” refers to programs developed by the former Ontario Power Authority (OPA) now the Independent Electricity System Operator (IESO) and the OEB, which is designed to encourage and promote greater use of renewable energy sources including wind, waterpower, biomass, and solar, from smaller generating projects that would be connected to an electricity Distribution System in Ontario.

For a list of current generation procurement standard offer programs, please visit the link below:  
<http://www.ieso.ca/Pages/Participate/Generation-Procurement/default.aspx>

**“Standard Supply Service”** means the service approved by the OEB and in effect at the relevant time, which, among other things, establishes the minimum conditions that a Distributor must meet in carrying out its obligations to sell electricity under Section 29 of the *Electricity Act*,

**“Standard Supply Service Code”** means the code, issued by the OEB, and in effect at the relevant time, which, among other things, sets the minimum conditions that a Distributor must meet in carrying out its obligation to sell electricity under Section 29 of the *Electricity Act* unless otherwise stated in its licence;

**“Sub-Transmission Customer”** means:

- (a) an Embedded Distributor; or
- (b) a Customer who has a load which is: a) Three Phase; b) directly connected to and supplied from Hydro One’s Distribution assets between 44 kV and 13.8 kV inclusive (the meaning of “directly” includes where Hydro One does not own the local transformation); and c) greater than 500 kW (monthly measured maximum demand averaged over the most recent calendar year, or whose forecasted monthly average demand over twelve consecutive months is greater than 500 kW);

**“Sub-Transmission System”** means a system related to the Distribution of electricity supplied at voltages above 13 kV, 3 wire but less than 50 kV, 3 wire;

**“Technical Interconnection Requirements”** means:

- (a) Hydro One’s “Interconnection Requirements for Distributed Generation for Single Phase DG – 10 kW or less and Three phase – less than 30 kW” which applies to all Micro-Embedded Generation Facilities and Small Embedded Generation Facilities that have a name-plated rated capacity of less than 30 kW; and
- (b) Hydro One’s “Distributed Generation Technical Interconnection Requirements for Generators Connecting to Hydro One’s Distribution System” which applies to all Generation Facilities other than those that are subject to the “Interconnection Requirements for Distributed Generation for Single Phase DG – 10 kW or less and Three phase - less than 30 kW”;

**“Three Phase”** means a system having three distinct alternating currents 120 degrees between each phase;

**“Total Losses”** means the sum of Distribution Losses and Unaccounted for Energy;

**“Transformer Loss Adjustment”** means the dollar value applied to a Customer account to rectify a charge of lost energy. A Sub-Transmission Customer qualifies for Transformer Loss Adjustment provided that their meter is located on the secondary side of the transformer.

**“Transformer Loss Allowance”** means the dollar value added to a Customer account to compensate for predicted energy loss. A General Service Customer qualifies for Transformer Loss Allowance, provided that their meter is located on the primary side of the transformer;

**“Total Normal Supply Capacity”** is defined in [section 2.1.9 A](#)

**“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, energy theft and non-attributable billing errors;

**“Unmetered Loads”** or **“Unmetered Scattered Loads”** means electricity consumption that is not metered and is billed based on estimated usage;

**“Upstream Transmission Rebates”** means refunds payable to any initial contributors in respect of work previously or currently being performed on Hydro One’s transmission system at the expense of initial contributor(s) where such work benefits future Customers and Embedded Generation Facilities that connect to Hydro One’s Distribution System within five years of the in service date of that work.

Upstream Transmission Rebates are determined by Hydro One considering such factors as the relative name-plated capacities of the initial contributor(s) and the future connecting Customer(s);

**“Urban Density Zone (UR)”** means an area containing 3,000 or more Customers with a line density of at least 60 Customers per kilometer. All classes of Customers are included in the density count;

**“Utilization Voltage”** means the highest voltage at which a Customer uses or distributes power on the Customer’s property;

**“Validating, Estimating and Editing”** or **“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;

**“V”** refers to Volts

**“Wholesale Market Participant”**, means a person that sells or purchases electricity or ancillary services through the IESO administered markets.