CONDITIONS OF SERVICE

REVISION #9

Effective Date: February 22, 2010

Comments to these revisions can be emailed to: **ConditionsofService@torontohydro.com**

Customers without e-mail access can fax inquiries to 416.542.2630, Attn: Brad Harper, or submit through regular mail to:

Standards & Policy Planning Department
Toronto Hydro-Electric System Limited
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Toronto Hydro-Electric System Limited

PREFACE

CONDITIONS OF SERVICE

The Distribution System Code (DSC) requires that every distributor produce its own "Conditions of Service" document. The purpose of this document is to provide a means for communicating the types and level of service available to the Customers and Consumers within Toronto Hydro'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), which in turn will retain it on file for the purpose of facilitating dispute resolutions in the event that a dispute cannot be resolved between the Customer and its distributor.

The acceptance of supply of electricity or related services from Toronto Hydro constitutes the acceptance of a binding contract with Toronto Hydro which includes this Conditions of Service ("Conditions") and all terms thereunder. The person so accepting the supply of electricity or related services shall be liable for payment for same, and such contract shall be binding upon the person's heirs, administrators, executors, successors or assigns.

This document follows the form and general content of the Condition of Service template appended to the DSC. The template was prepared to assist distributors in developing their own "Conditions of Service" document based on current practice and the DSC. The text of the template is shown *in italics* throughout this Conditions, right after each of the subheadings. The template outlines the minimum requirements. However, as suggested by the DSC, Toronto Hydro has expanded on the contents to encompass local characteristics and other specific requirements.

Section 2 (Distribution Activities (General)) contains references to services and requirements that are common to all Customer classes. This section covers items such as Rates, Billing, Hours of Work, Emergency Response, Power Quality, Available Voltages and Metering.

Section 3 (Customer Class Specific) contains references to services and requirements specific to the respective Customer class. This section covers items such as Service Entrance Requirements, Delineation of Ownership, Special Contracts, etc.

Other sections include the *Glossary of Terms, Tables* and *References.*

Subsequent changes will be incorporated with each submission to the OEB.

The latest revisions to the Conditions of Service are highlighted in red. Comments to these revisions can be emailed to ConditionsofService@torontohydro.comToronto Hydro will file to the Ontario Energy Board a summary of public comments received from customers about the changes.

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Table 7 **Instrument Transformers and Enclosures (Article 2.3.7.2)**

Table 8 **Meter Centres (Article 2.3.7.1.2)**

Table 9 **Toronto Hydro Distribution Construction Standards Price List**

SECTION 6 REFERENCES

1. **Economic Evaluation Model for Distribution System Expansion**
   Refer to Appendix B of the Distribution System Code:
   "Methodology and Assumptions for an Economic Evaluation"

2. **Standard Toronto Hydro Connection Agreements and Terms of Conditions**
   - Schedule A:
     - Toronto Hydro-Electric System Limited Connection Agreement
   - Schedule B1:
     - Micro-Embedded Generation Facility Connection Agreement
   - Schedule B2:
     - Form of Connection Agreement for a Small, Mid-Sized, and Large Embedded Generation Facility
   - Schedule B3:
     - Connection Agreement for an Embedded Generation Facility Larger than 10 MW
   - Schedule C:
     - Wholesale Market Participant Connection Agreement Terms and Conditions

3. **Toronto Hydro Parallel Generation Requirements**

4. **Toronto Hydro Requirements for the Design & Construction of Customer-Owned High Voltage Substations**

5. **THESL Requirements for Customer-Owned Structures**

6. **THESL Metering Requirements 750 Volts or Less**

7. **Metering Requirements for 13.8 kV & 27.6 kV Customer-Owned Substations**

8. **Construction Contractor Qualification Application for Contestable Work**

Section 1 – INTRODUCTION

1.1 Identification of Distributor and Service Area

In this section the distributor should identify its service area as defined in the Distributor's License.

Toronto Hydro-Electric System Limited, referred to herein as "Toronto Hydro," is a corporation incorporated under the laws of the Province of Ontario and a distributor of electricity.

Toronto Hydro is licensed by the Ontario Energy Board ("OEB") to supply electricity to Customers as described in the Electricity Distribution License issued to Toronto Hydro on October 17, 2003 by the OEB and expiring October 16, 2023 ("Distribution License"). Additionally, there are requirements imposed on Toronto Hydro by the various codes referred to in the Distribution License and by the Electricity Act, 1998 and the Ontario Energy Board Act, 1998.

Toronto Hydro may only operate distribution facilities within its Licensed Territory as defined in its Distribution License. This service area is subject to change with the OEB's approval.

Nothing contained in this Conditions of Service ("this Conditions") or in any contract for the supply of electricity by Toronto Hydro shall prejudice or affect any rights, privileges, or powers vested in Toronto Hydro by law under any Act of the Legislature of Ontario or the Parliament of Canada, or any regulations thereunder.

1.1.1 Distribution Overview

Toronto Hydro distributes electrical power through 13.8kV and 27.6 kV primary distribution systems. On the 27.6 kV system all feeders are arranged to run in an open-loop fashion with open points between adjacent feeders. These feeders supply distribution transformers either directly or through 13.8 kV or 4 kV sub-distribution systems. There are presently four types of distribution design systems at the 13.8 kV primary voltage level:

- 13.8 kV underground radial
- 13.8 kV overhead open loop
- 13.8 kV underground open-loop
- 13.8 kV underground network

The underground network system is distinct from the other systems. This low-voltage secondary network system may be available to some Customers in the downtown core of the City of Toronto as a source of supply at 120/208 V, depending on the local capacity of the system and the energy requirements of the Customer.

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The supply of electricity by Toronto Hydro to any Customer will be at one of the following primary voltage levels: 27.6 kV or 13.8 kV depending on the proximity of the Customer's premises to the nearest distribution facility. For connection of a Customer at 4 kV level, Toronto Hydro will carry out a special study to justify the investment. The cost of this study may be charged to the Customer.

1.2 Related Codes and Governing Laws

This section should reference any legislation that is applicable to the distributor – Customer relationship.

The supply of electricity or related services by Toronto Hydro to any Customer or Consumer shall be subject to various laws, regulations, and codes, including the provisions of the latest editions of the following acts, codes and licences:

1. Electricity Act, 1998 } part of the Energy Competition
2. Ontario Energy Board Act, 1998 } Act, 1998
3. Distribution Licence
4. Affiliate Relationships Code
5. Transmission System Code
6. Distribution System Code
7. Retail Settlement Code
8. Standard Supply Service Code

In the event of a conflict between this document and the Distribution License or regulatory codes issued by the OEB, or the Energy Competition Act, 1998 (the "Act"), the provisions of the Act, the Distribution License and associated regulatory codes shall prevail in the order of priority indicated above.

When planning and designing for electricity service, Customers and their agents must refer to all applicable provincial and Canadian electrical codes, and all other applicable federal, provincial, and municipal laws, regulations, codes and by-laws to also ensure compliance with their requirements. Without limiting the foregoing, the work shall be conducted in accordance with the latest edition of the Ontario Occupational Health and Safety Act (OHSA), the Regulations for Construction Projects and the harmonized Electric Utility Safety Association (EUSA) rulebook.

1.3 Interpretations

This section should describe the rules for interpretation of the Conditions of Service document.

In this Conditions, unless the context otherwise requires:

- Headings, paragraph numbers and underlining are for convenience only and do not affect the interpretation of this Conditions;

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- Words referring to the singular include the plural and vice versa;
- Words referring to a gender include any gender

1.4 Amendments and Changes

This section should outline the process for making changes to this document. Include any public notice provisions.

The provisions of this Conditions in effect at the time Toronto Hydro signs the contract shall form part of any contract made between Toronto Hydro and any connected Customer, Consumer or Retailer. This Conditions supercedes all previous conditions of service, oral or written, of Toronto Hydro including any of its predecessor municipal electric utilities as of its effective date.

In the event of changes to this Conditions, Toronto Hydro will issue a notice with the Consumer's bill. Toronto Hydro may also issue a public notice in a local newspaper.

The Customer is responsible for contacting Toronto Hydro to obtain the current version of this Conditions. Toronto Hydro may charge a reasonable fee for providing the Customer with a copy of this document. The current version of this document is also posted on the Toronto Hydro website and can be downloaded from www.torontohydro.com.

1.5 Contact Information

This section should provide information on how a Customer can contact the distributor. Include such items as:

- ***Address of the distributor,***
- ***Telephone numbers,***
- ***Normal business hours, and***
- ***Emergency contact numbers.***

Toronto Hydro can be contacted 24 hours a day at 416-542-8000 or such other numbers as Toronto Hydro may advise through its website, invoices or otherwise. Normal working hours is Monday to Friday between 8:30 a.m. and 4:30 p.m. The mailing address is 14 Carlton Street, Toronto Ontario M5B 1K5.

1.6 Customer Rights

This section should outline the rights and obligations a Customer or embedded generator has with respect to the distributor that are not covered elsewhere in this document.

Toronto Hydro shall only be liable to a Customer and a Customer shall only be liable to Toronto Hydro for any damages that arise directly out of the willful

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misconduct or negligence:

- of Toronto Hydro in providing distribution services to the Customer;
- of the Customer in being connected to Toronto Hydro's distribution system; or
- of Toronto Hydro or Customer in meeting their respective obligations under this Conditions, their licences and any other applicable law.

Notwithstanding the above, neither Toronto Hydro 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.

The Customer shall indemnify and hold harmless Toronto Hydro, its directors, officers, employees and agents from any claims made by any third parties in connection with the construction and installation of an embedded generation facility or other electrical apparatus by or on behalf of the Customer.

1.7 Distributor Rights

This section should outline the rights a distributor has with respect to a Customer or embedded generator that are not covered elsewhere in this document.

1.7.1 Access to Customer Property

Toronto Hydro shall have access to Customer's property in accordance with section 40 of the *Electricity Act, 1998.*

1.7.2 Safety of Equipment

The Customer shall comply with all aspects of the Ontario Electrical Safety Code with respect to insuring that equipment is properly identified and connected for metering and operation purposes and will take whatever steps necessary to correct any deficiencies, in particular cross wiring situations, in a timely fashion. If the Customer does not take such action within a reasonable time, Toronto Hydro may disconnect the supply of electricity to the Customer.

The Customer shall not use or interfere with the facilities of Toronto Hydro except in accordance with a written agreement with Toronto Hydro. Toronto Hydro has the right to seal any point where a connection may be made on the line side of the metering equipment.

The Customer shall not build, plant or maintain or cause to be built, planted or maintained any structure, tree, shrub or landscaping that would or could

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obstruct the running of distribution lines, endanger the equipment of Toronto Hydro, interfere with the proper and safe operation of Toronto Hydro's facilities or adversely affect compliance with any applicable legislation in the sole opinion of Toronto Hydro. Where an obstruction is discovered, Toronto Hydro will notify the Customer and provide a reasonable time for the Customer to correct any obstructions. If the Customer does not remove such obstruction within the reasonable time designated by Toronto Hydro, Toronto Hydro may disconnect the supply of electricity to the Customer and/or remove, relocate or, in the case of shrubs or other vegetation, trim such obstructions at the Customer's expense, and Toronto Hydro shall not be liable to the Customer for any damages arising as a result thereof, other than physical damage to facilities arising directly from entry on the Customer's property. Toronto Hydro's policies and procedures with respect to the disconnection process are further described in this Conditions.

1.7.3 Tree and Vegetation Management

To ensure public safety and the continued reliable operation of its distribution system Toronto Hydro will maintain clearance around its distribution lines on a cyclical or as-needed basis in close cooperation with the City's forestry department. The tree trimming cycle may vary depending on extent of storm damage, health of trees, and vegetation type.

Toronto Hydro will coordinate and maintain tree clearance around all its distribution lines that are located on public allowance. Toronto Hydro will also maintain tree clearance around its overhead lines over 750 Volts that may be located on private property at no cost to the Customer. Toronto Hydro will endeavour to discuss the planned re-clearing with property owners prior to work being performed in order to mitigate the impacts to the environment and the property. However, in the event of emergencies, Toronto Hydro may be unable to notify the property owner prior to performing the work.

Customers are responsible for all initial tree trimming for all new overhead lines that will be located on private property. Customers are also responsible for continuing tree trimming, tree and brush removal around service lines that are less than 750 Volts that are located on private property as well as around overhead lines over 750 Volts when these lines are owned by the Customer. Clearances must conform to the Electrical Safety Code.

To permit the safe clearance of trees and vegetation from overhead lines over 750 Volts located on private property Toronto Hydro will, upon at least ten days prior notice from the Customer, once each year during normal business hours, disconnect and reconnect the Customer's supply without charge.

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1.7.4 Operating Control

The Customer shall provide a convenient and safe place, satisfactory to Toronto Hydro, for installing, maintaining and operating its equipment in, on, or about the Customer's premises or in, on, or about the public road allowance for non-metered connections. Toronto Hydro assumes no risk and will not be liable for damages resulting from the presence of its equipment on the Customer's premises or in, on, or about the public road allowance for non-metered connections, or approaches thereto, or any acts, omissions or events beyond its control, or the negligence or willful misconduct of any Persons over whom Toronto Hydro has no control.

Unless an employee or an agent of Toronto Hydro, or other Person lawfully entitled to do so, no Person shall remove, replace, alter, repair, inspect or tamper with Toronto Hydro's equipment.

Customers will be required to pay the cost of repairs or replacement of Toronto Hydro's equipment that has been damaged or lost by the direct or indirect act or omission of the Customer or its agents.

The physical location on Customer's premises or the public road allowance for non-metered connections at which a distributor's responsibility for operational control of distribution equipment ends is defined by the Distribution System Code as the "operational demarcation point".

1.7.5 Repairs of Defective Customer Electrical Equipment

The Customer will be required to repair or replace any equipment owned by the Customer that may affect the integrity or reliability of Toronto Hydro's distribution system. If the Customer does not take such action within a reasonable time, Toronto Hydro may disconnect the supply of electricity to the Customer. Toronto Hydro's policies and procedures with respect to the disconnection process are further described in this Conditions.

1.7.6 Repairs of Customer's Physical Structures

The Customer is responsible for providing, maintaining, repairing and replacing, in a safe condition satisfactory to Toronto Hydro, all the Customer's civil infrastructure on private property or in the public road allowance for non-metered connections, including but not limited to poles, underground conduits, cable chambers, cable pull rooms, transformer rooms, transformer vaults, transformer pads, tap boxes, handwells, and junction boxes that Toronto Hydro deems required to house Toronto Hydro's Connection Assets.

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Notwithstanding the above, unless otherwise agreed to by the parties and subject to the Customer providing an easement to Toronto Hydro, Toronto Hydro will provide, maintain, repair and replace those physical infrastructure (such as poles, underground conduits, cable chambers, transformer vaults, transformer pads, and switching vaults) that are required to house the primary distribution systems built along private streets that supply Customers of Multi-unit Residential developments (part of Class 3B). Effective November 15, 2004, Toronto Hydro will treat such infrastructure in the same way as those located in the public road allowance.

The Customer shall inspect its facilities at regular intervals, including those facilities that house exposed high voltage equipment that are owned by Toronto Hydro. Given that access to the latter facilities is under the control of Toronto Hydro, the Customer shall contact Toronto Hydro at the applicable phone number:

- 416-542-3564 (former Toronto & East York)
- 416-542-3567 (former Scarborough, North York East of Yonge area)
- 416-542-3001, ext. 33065 (former Etobicoke, York, North York West of Yonge)

to make appropriate arrangements prior to inspecting its facilities and making repairs as required.

Where structural deficiencies to walls, ceiling, doors, vents, drains, or other Customer owned structures, are identified as a result of its inspection, Toronto Hydro will notify the Customer and provide a reasonable time for the Customer to correct any deficiencies to its facilities.

If the Customer does not carry out its repairs within a reasonable time, or the repairs are not considered adequate by Toronto Hydro or an inspection authority, Toronto Hydro may disconnect the supply of electricity to the Customer and carry out the repairs at the Customer's expense, and Toronto Hydro shall not be liable to the Customer for any damages arising as a result thereof, other than physical damage to facilities arising directly from entry on the Customer's property. Toronto Hydro's policies and procedures with respect to the disconnection process are further described in this Conditions.

1.8 Disputes

Any dispute between Customers or Retailers and the Distributor shall be settled according to the dispute resolution process specified in the Distributor Licence. In this section, the Distributor should outline the Customer Complaint and Dispute Resolution process that has been established as a condition of licence.

If a Customer, Consumer or other market participant has a complaint about

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Toronto Hydro regarding services provided by Toronto Hydro under its Electricity Distribution License, the Consumer may contact one of Toronto Hydro's Customer Care representatives at 416-542-8000 during regular business hours, between 8:30 AM and 4:30 PM Monday to Friday, or e-mail the complaint to contactus@torontohydro.com.

Upon receipt of a complaint, a Toronto Hydro Customer Care representative will contact the Customer, Consumer or other market participant to acknowledge receipt of the complaint and, if possible, to resolve the complaint, and will investigate and follow-up on the complaint as required to resolve the complaint. If a Customer, Consumer or other market participant complaint cannot be resolved by contacting one of Toronto Hydro's Customer Care representatives, Toronto Hydro will refer the unresolved complaint to an independent third party complaints resolution agency that has been approved by the Ontario Energy Board. Until such time as the Ontario Energy Board approves such an independent third party complaints resolution agency, such complaints will be referred to the Ontario Energy Board, which has assumed this role.

Section 2 – DISTRIBUTION ACTIVITIES (GENERAL)

2 DISTRIBUTION ACTIVITIES (GENERAL)

This section should include information that is applicable to all Customer classes of the distributor. Items that are applicable to only a specific Customer class are covered in Section 3.

2.1 Connections - Process and Timing

Under the terms of the Distribution System Code, Toronto Hydro has the obligation to either connect or to make an "Offer to Connect" any Customers that lie in its service area.

The Customer or its representative shall consult with Toronto Hydro concerning the availability of supply, the supply voltage, service location, metering, and any other details. These requirements are separate from and in addition to those of the Electrical Safety Authority (ESA). Toronto Hydro will confirm, in writing, the characteristics of the electricity supply.

The Customer or its authorized representative shall apply for new or upgraded electricity services and temporary power services in writing. The Customer is required to provide Toronto Hydro with sufficient lead-time in order to ensure:

(a) the timely provision of electricity supply to new and upgraded premises or
(b) the availability of adequate capacity for additional loads to be connected in existing premises.

Toronto Hydro shall make every reasonable effort to respond promptly to a Customer's request for connection. Toronto Hydro shall respond to a Customer's written request for a Customer connection within 15 calendar days of receipt of the written request. Toronto Hydro will make an offer to connect within 60 calendar days of receipt of the written request, unless other necessary information is required from the Customer before the offer can be made. Requirements regarding the process and timing of embedded generation facility connections are set forth in Section 3.5.

Toronto Hydro shall make every reasonable effort to respond promptly to another distributor's request for connection. Toronto Hydro shall provide an initial consultation with another distributor regarding the connection process within thirty (30) days of receiving a written request for connection. A final offer to connect the distributor to Toronto Hydro's distribution system shall be made within ninety (90) days of receiving the written request for connection, unless other necessary information outside the distributor's control is required before the offer can be made.

If special equipment is required or equipment delivery problems occur, then longer lead times may be necessary. Toronto Hydro will notify the Customer of any

Section 2 – DISTRIBUTION ACTIVITIES (GENERAL)

extended lead times.

In addition to any other requirements in this Conditions, the supply of electricity is conditional upon Toronto Hydro being permitted and able to provide such a supply, obtaining the necessary apparatus, material, and easements, and constructing works to provide the service. Should Toronto Hydro not be permitted or able to do so, it is under no responsibility to the Customer whatsoever and the Customer releases Toronto Hydro from any liability in respect thereto.

Requirements regarding Connection Agreements are set forth in Sections 2.1.7.4, 3.5, 3.6 and 3.7, respectively for load Customer, a Generator, Wholesale Market Participant, and Embedded Distributor.

2.1.1 Building that Lies Along

In this section, the Distributor should describe the standard connection allowance or charge used by the Distributor in its service territory and describe any variable connection fees that would be charged beyond the standard allowance.
The Distributor also may stipulate in this section other terms and conditions by which a Customer requesting a Connection must abide, as long as it is within the terms of the DSC code.

For the purpose of this Conditions "lies along" means a Customer property or parcel of land that is directly adjacent to or abuts onto the public road allowance where Toronto Hydro has distribution facilities of the appropriate voltage and capacity.

Under the terms of the Distribution System Code, Toronto Hydro has the obligation to connect (under Section 28 of the Electricity Act, 1998) a building or facility that “lies along” its distribution line, provided:

a) the building can be connected to Toronto Hydro’s distribution system without an expansion or enhancement and,
b) the service installation meets the conditions listed in the Conditions of Service of the distributor that owns and operates the distribution line.

The location of the Customer's service entrance equipment is subject to the approval of Toronto Hydro and the Electrical Safety Authority.

2.1.1.1 Connection Charges

Toronto Hydro shall recover costs associated with the installation of connection assets by Customer Class via Basic Connection Costs through the economic evaluation for Expansions and Variable Connection Costs, collected directly from the Customer, as applicable.

Section 2 – DISTRIBUTION ACTIVITIES (GENERAL)

The Variable Connection Costs shall be calculated as the costs associated with the installation of Connection assets **above and beyond** the Standard Allowance for Basic Connection as described in Tables 1.1, 1.2, and 1.3. Toronto Hydro will recover this Variable Connection Costs, which shall be based on actual cost, directly from the Customer.

2.1.2 Expansions / Offer to Connect

Under the terms of the DSC, a Distributor has the Obligation to make an Offer to Connect any Building that is in the distributor' s service territory that cannot be connected without an expansion or enhancement, or "lies along" its distribution system, but may be denied connection for the reasons described in subsection 2.1.3 of the distributor's Conditions of Service.

The Offer to Connect must be fair and reasonable and be based on the distributor's design standard. The Offer to Connect also must be made within a reasonable time from the request for connection.

In this section, the Distributor should outline, in detail, the process followed to determine any required capital contributions. This section also should describe any fixed connection fees as well as variable connection fees, by Customer class.

Effective January 23, 2007, if Toronto Hydro proposes to connect a new Customer load to Toronto Hydro's distribution system facilities or upgrade a connection to an existing Customer, and an expansion of Toronto Hydro's distribution system is required, Toronto Hydro will perform an economic evaluation of the expansion project in accordance with the Capital Contribution policy set out in Section 2.1.2.2 to determine if the future revenue from the Customer(s) will pay for the costs pertaining to the expansion including but not limited to:

1) on-going operating, maintenance & administration (whether actually incurred or apportioned on the manner set forth below) costs - *"OM&A Costs"*
2) the historical average distribution system enhancement capital cost per kW- "*Enhancement Costs"*
3) the distribution system expansion capital cost - *"New Expansion Costs"*
4) the basic cost of connection outlined in Tables 1.1, 1.2 and 1.3 – "Basic Connection Costs"

(Enhancement Costs, New Expansion Costs and Basic Connection Costs, collectively "Expansion Fees")

Enhancement Costs are those which Toronto Hydro has incurred over the past three (3) years to increase the distribution system capacity to accommodate new Customer loading facilities on Toronto Hydro's distribution system, consistent with the Toronto Hydro's planning, design, and construction standards, and include the following:

Section 2 – DISTRIBUTION ACTIVITIES (GENERAL)

- The construction of new distribution feeders & circuits (overhead or underground, single phase or multi-phase) along its existing distribution facilities that are intended to be serving other Customers.
- The upgrading of existing conductors with higher capacity conductors.
- Conversions of existing lower voltage distribution facilities to higher voltage distribution facilities with greater supply capacity.
- The installation of switching and protection facilities associated with the construction and/or upgrading of existing distribution feeders and circuits.
- The construction of new and/or upgrading of distribution stations and transformation facilities associated with the additional loading.
- Capital contributions paid by the distributor for upstream additional facilities, typically owned by a transmitter.

Toronto Hydro has aggregated its historical reinforcement capital expenditures over the past three (3) years (and will update them on an annual basis) and has derived an average cost reinforcements in $/kW that will apply to all expansion projects.

In addition, Toronto Hydro will include in the economic evaluation for a Customer requiring an expansion all those capital expenditures that are associated with the installation of new distribution facilities & circuits when these are essentially required to accommodate new Customer loading. The above distribution facilities & circuits shall meet all of the following criteria:

- Are required to accommodate new Customer load.
- Are not intended to be serving other Customers, other than "non-forecasted" Customers referred to in Section 2.1.2.7.
- Are consistent with Toronto Hydro's planning, design, and construction standards.

For the purpose of determining OM&A Costs Toronto Hydro will use system average operating, maintenance and administrative expenditures as a proxy for incremental OM&A expenditures and apportion them as fixed costs (for Rate Class 1 and 2) or as a function of $/kW of demand (for Rate Class 3, 4, and 5).

The Expansion Fees are in addition to any Variable Connection Fees. Refer to Table 1.1, 1.2 and 1.3 in Section 5 for each Customer Class.

For the purpose of establishing the "Estimated Incremental Demand" to be used in the economic evaluation, the Customer shall provide a valid estimate of the proposed incremental demand for evaluation and acceptance by Toronto Hydro. If the Customer and Toronto Hydro are unable to agree on a valid incremental demand for new Class 3, 4, and 5 Customers or in the absence of adequate

billing history for existing Customers, Toronto Hydro will set the "Estimated Incremental Demand" to equal to 90% of the "incremental installed transformer capacity".

Using the "Estimated Incremental Demand", Toronto Hydro shall then calculate the "Estimated Incremental Revenues" of new Customers using the "fixed charge" and the "variable charge" that have been approved by the Ontario Energy Board for the Rate Class applicable to each individual new meter installed in connection with the expansion project. For existing Customers Toronto Hydro shall apportion the "fixed charge" based on the ratio between the incremental load and the combined load.

In performing the economic evaluation, should the Net Present Value (NPV) of the costs and revenues associated with the Expansion be less than zero, a capital contribution in the amount of the shortfall is required. Toronto Hydro has elected to collect this shortfall from the Customer in accordance with its Capital Contribution policy as outlined in Section 2.1.2.2.

The amount charged by Toronto Hydro to a generator to construct the expansion to connect a generation facility to the Toronto Hydro distribution system shall not exceed the generator's share of the present value of the projected capital costs and on-going maintenance costs for the equipment. Projected revenue and avoided costs from the generation facility shall be assumed to be zero, unless otherwise determined by rates approved by the Ontario Energy Board. The methodology and inputs that Toronto Hydro will use to calculate this amount are presented in Appendix B of the Distribution System Code.

2.1.2.1 Offer to Connect & Alternative Bid Work

Toronto Hydro will provide one offer to connect to the Customer for any plans submitted to Toronto Hydro for an expansion project, at no expense to the Customer. If the Customer submits revised plans, Toronto Hydro may provide a new firm offer to connect for revised plans at the Customer's expense.

If all of the following conditions are met, Toronto Hydro may proceed with the expansion work for a project without giving the Customer a formal Offer to Connect:

- the incremental demand is less than 200kW
- the expansion work does not require a capital contribution from the Customer; and
- the construction work for the expansion involves work only with existing circuits.

If the project meets all of the following conditions:

- the project requires a capital contribution from the Customer and

Section 2 – DISTRIBUTION ACTIVITIES (GENERAL)

- the construction work would not involve work with existing circuits,

then, Toronto Hydro will also advise the Customer that he or she has the choice to obtain alternative bids from a qualified contractor for the construction of those connection and expansion facilities that are specified in the Offer to Connect as contestable work for which the Customer may obtain an alternative bid.

To qualify to undertake contestable work, contractors shall submit a "Construction Contractor Qualification Application" and meet the requirements posted at: http://www.torontohydro.com/electricsystem/webassets/documents/Ref_8_Contractors_Qualifications_for_Contestable_Work.pdf no later than 30 business days prior to their selection by the customer to undertake contestable work. To avoid delay in the start of the contestable work the Customer shall engage a contractor that is qualified.

In addition, Toronto Hydro does not make any representation or warranty regarding any contractor selected by the Customer to do any work regardless of whether the contractor has completed the requirements set by Toronto Hydro or not and shall have no liability to the Customer in respect of such work.

Toronto Hydro will also include in the Offer to Connect or by separate document an estimate of any costs that will be incurred by Toronto Hydro in the event that the Customer decides to pursue an alternative bid for the contestable work, including but not limited to the following:

- costs for additional design, engineering, or installation of facilities required to complete the project that were made in addition to the original Offer to Connect;
- costs for inspection or approval of the work performed by the contractor hired by the Customer, and
- costs for making the final connection of the new facilities to the Toronto Hydro distribution system.

Within sixty (60) days of receiving the Offer to Connect, the Customer shall return a signed copy of the Offer to Connect indicating acceptance of the offer, or, notify Toronto Hydro of its rejection of Toronto Hydro's Offer to Connect and of its decision to pursue an alternative bid.

If the Customer decides to pursue an alternative bid, the Customer and his qualified contractor shall only use materials that meet the same specifications as Toronto Hydro approved materials (i.e. same manufacturers and same part numbers). Once the Customer has hired a qualified contractor, the Customer

Section 2 – DISTRIBUTION ACTIVITIES (GENERAL)

may request and obtain from Toronto Hydro the listing of approved materials that may be required for the alternative bid work.

Upon receipt of notice that a Customer will be pursuing an alternative bid Toronto Hydro shall advise the Customer of the amount the Customer shall be required to pay to Toronto Hydro in respect of costs to be incurred by Toronto Hydro in connection with the expansion project. Even if no expansion deposit is otherwise required hereunder, the Customer shall post an expansion deposit in the amount of 10% of the value of contestable work in accordance with Section 2.1.2.3.

2.1.2.2 Capital Contribution Policy

The capital contribution policy elected by Toronto Hydro shall be consistent with the policy outlined below for each Customer Class:

Class 1 – Residential Single Service: No Transformation required on private property

- Overhead or Underground: *Capital contribution **not** collected from Customer*

Class 2 - General Service, (Below 50 kW): No Transformation required on private property

- Overhead or Underground: *Capital contribution **not** collected from Customer*

Class 3 - General Service (50 kW – 999 kW): *Capital contribution collected from Customer*

Class 4 - General Service (1000 kW – 4999 kW): *Capital contribution collected from Customer.*

Class 5 – Large User (5000 kW and above)*: Capital contribution collected from Customer*

For the purpose of determining the amount of Capital Contribution payable by a Customer the following clarification and exception shall apply:

- Condominium apartments and apartment buildings that have a demand less than 1,000 kW are part of Class 3A General Services
- Condominium townhouse units intended to remain in private property are part of Class 3B General Service
- Townhouse units built (or intended to be) fronting public road allowances are part of Class 3C “Residential Subdivision”

Section 2 – DISTRIBUTION ACTIVITIES (GENERAL)

- Townhouse units built as "freehold" (i.e. on property owned by the individual townhouse owner) are part of Class 3C "Residential Subdivision"
- Low-rise residential developments involving more than 5 lots regardless of demand are classified as Class 3C "Residential Subdivision".

However, notwithstanding the treatment of capital contribution, Toronto Hydro shall in all cases calculate the "Estimated Incremental Revenues" of new Customers using the "fixed charge" and the "variable charge" that have been approved by the Ontario Energy Board for the Rate Class applicable to each individual new meter installed in connection with the expansion project.

To determine the amount of Capital Contribution required from a Class 3, 4, or 5 Customer for an expansion project, Toronto Hydro will perform an economic evaluation by inputting the project specific information together with a set of standardized assumptions and specific annual parameters into a proprietary "Business Economic Model" developed for Toronto Hydro in accordance with the methodology and inputs outlined in Appendix B of the Distribution System Code ("Economic Evaluation").

2.1.2.2.1 Offer to Connect – Content & Process

Based on the output of its Economic Evaluation, Toronto Hydro will set out in the Offer to Connect the following, as applicable:

(a) Whether the offer is a firm offer or an estimate of costs that would be revised in the final payment to reflect actual costs incurred;

(b) the amount of the capital contribution;

(c) the calculation used to determine the amount of the capital contribution including all of the assumptions and inputs used to produce the economic evaluation;

(d) a statement as to whether the offer includes work for which the Customer may obtain an alternative bid, and, if so, the process by which the Customer may obtain the alternative bid;

(e) a description of, and costs for, the contestable work and the uncontestable work associated with the expansion broken down into the following categories:

(i) labour (including design, engineering and construction);

(ii) materials;

(iii) equipment; and

(iv) overhead costs (including administration);

(f) the amount for any additional costs that will occur as a result of the alternative bid option being chosen including, but not limited to, inspection and final connection costs ("additional costs for alternative bid work");

(g) the amount for the basic cost of connection; and

(h) the expansion deposit, including 10% of the cost of the contestable work, where applicable.

If there is a conflict between an Offer to Connect and this Conditions, the Offer to Connect shall govern.

2.1.2.2.2 Transfer Price for Contestable Work

The transfer price for the contestable work shall be the lower of the cost to the Customer to construct the expansion facilities or the amount set out in the initial Offer to Connect to do the contestable work less the "additional costs for alternative bid".

If the Customer does not provide the cost to construct the expansion facilities to Toronto Hydro within 30 days of all of the new facilities being energized, then the amount of the transfer price shall be the amount set out in the initial Offer to Connect to do the contestable work.

2.1.2.2.3 Final Economic Evaluation & Capital Contribution Settlement

If the Offer to Connect is an estimate of the costs to construct the expansion and not a firm offer, Toronto Hydro will carry out a final Economic Evaluation once the facilities are energized. The final Economic Evaluation will be based on forecasted revenues, actual costs incurred for the uncontestable work, and the transfer price to be paid to the Customer for the contestable work, where applicable.

If the Offer to Connect is a firm offer and the Customer has exercised the alternative bid option, Toronto Hydro will carry out a final Economic Evaluation once the facilities are energized. The final Economic Evaluation will be based on the amounts used in the firm offer for costs and forecasted revenues, plus any transfer price to be paid to the Customer for the contestable work, where applicable.

If the required capital contribution amount resulting from the final Economic Evaluation differs from the required capital contribution

amount resulting from the initial Economic Evaluation, Toronto Hydro will obtain from the Customer, or credit the Customer for, any difference between the two amounts.

Toronto Hydro will provide the Customer with the calculation used to determine the final capital contribution amount including all of the assumptions and inputs used to produce the final Economic Evaluation at no cost to the customer.

2.1.2.3 Expansion Deposit

To keep Toronto Hydro harmless in respect of the Expansion Fees and OM&A Costs for a New Expansion, an Offer to Connect may require Class 3 Customers requesting multi-phase developments, Class 4 Customers (Commercial and Industrial) and Class 5 Customers (Commercial and Industrial) to provide an expansion deposit to cover the difference between the actual Expansion Fees and the amount of the capital contribution paid by the Customer, in accordance with Toronto Hydro's Economic Evaluation of the expansion.

The proposed project will also be evaluated through the Expansion Deposit Reduction Model to determine if a reduction in the Expansion Deposit is appropriate.

In addition, where a Customer (regardless of its Class) intends to exercise the alternative bid option, even if no expansion deposit is otherwise required hereunder, the Customer shall post an expansion deposit in an amount equal to 10% of the cost of the contestable work as set out in the Offer to Connect ("warranty portion of the expansion deposit"). Toronto Hydro will retain this portion of the expansion deposit for a warranty period of up to two years and may apply such deposit to any work required to repair the expansion facilities within the two-year warranty period.

The two-year warranty period begins at the end of the Realization Period. The Realization Period for a project ends:

- For residential developments, upon the first to occur of the materialization of the last forecasted connection in the expansion project, or five (5) years after energization of the new facilities, and
- For commercial and industrial developments, upon the first to occur of the materialization of the last forecasted demand, or five (5) years after energization of the new facilities.

Section 2 – DISTRIBUTION ACTIVITIES (GENERAL)

Toronto Hydro shall return to the Customer the unapplied portion of the expansion deposit, if any, at the end of the two-year warranty period.

The expansion deposit must be either in the form of (i) cash or (ii) an irrevocable commercial letter of credit issued by a Schedule I bank as defined in the Bank Act, or (iii) surety bond, but the form of deposit must expressly provide for its use to cover the events for which it is held as a deposit. The expansion deposit including the portion compromising the warranty expansion deposit shall be in addition to any other charges or deposits that may be required by Toronto Hydro and shall be provided prior to the commencement of any expansion work or the installation of any connection assets.

Except for the warranty portion of the expansion deposit which shall be retained for the duration of the warranty period, once the facilities are energized, Toronto Hydro shall agree to a reduction at the end of each 365-day period in the amount of the expansion deposit in an amount calculated by multiplying the original expansion deposit by a percentage derived by dividing the actual connections (for residential developments) or actual demand (for commercial and industrial developments) completed or materialized in that 365-day period by the total number of connections (for residential developments) or actual demand (for commercial and industrial developments) contemplated in the original Offer to Connect. (For example, if twenty percent of the forecasted connections or demand materialized in a year, then Toronto Hydro will return to the customer twenty percent of the original expansion deposit.)

However, if after five (5) years from the energization date of the facilities the total number of connections (for residential developments) or the actual demand (for commercial and industrial developments) contemplated by the Original Offer to Connect have not materialized, Toronto Hydro shall retain any cash held as an expansion deposit, or be entitled to realize on any letter of credit or bond held as an expansion deposit and retain any cash resulting therefrom, with no obligation to return any portion of such monies to the Customer at any time.

If the Customer has provided any expansion deposit in the form of cash, any portion of the expansion deposit held as cash returned to the Customer shall include interest on the returned amount from the date of receipt of the full amount of the expansion deposit at the Prime Business Rate set by the Bank of Canada less 2 percent.

Section 2 – DISTRIBUTION ACTIVITIES (GENERAL)

2.1.2.4 Supply Agreement

Class 3, 4 and 5 Customers may be required to enter into a Supply Agreement with Toronto Hydro to clarify the responsibilities of each party pertaining to the construction and maintenance of the expansion and or connection assets.

2.1.2.5 Rebates of Capital Contribution

In scenarios where Toronto Hydro is required to incur New Expansion Costs solely for the connection of a Customer, the Customer will be required to pay Toronto Hydro 100% of the calculated shortfall. If within 5 years from the connection date, non-forecasted Customers are connected to this new plant without any further capital costs, Toronto Hydro will rebate the first Customer for the portion of the "New Expansion" that is shared with non-forecasted Customers. Toronto Hydro will provide such a rebate at the time and in conjunction with the Settlement of each relevant subsequent Capital Contribution.

The amount of the rebate to the first Customer shall be the shared portion of the expansion equally contributed to by all "non-forecasted Customers". The amount of capital contribution previously paid by the first Customer also constitutes the "upset" limit of the rebate to the first Customer.

2.1.2.6 Feeder Capacity Optimization

Toronto Hydro will provide service to the Customer during the Realization Period based upon the Estimated Incremental Demand indicated in the Offer to Connect that has been signed by the Customer. However, unused capacity will not be reserved past the Realization Period.

After the Realization Period Toronto Hydro reserves the right to examine the Customer's peak demand with a view to optimizing its feeder capacity. If the actual peak demand is lower than the Estimated Incremental Demand, then Toronto Hydro will adjust downwards its internal peak demand forecast and may re-assign any unused capacity if it determines this is appropriate to meet other demand needs.

After the Realization Period the Customer shall obtain the consent of Toronto Hydro prior to effecting any substantial increase its peak demand, regardless of the Estimated Incremental Demand set forth in the Offer to Connect, or through past demand history.

Section 2 – DISTRIBUTION ACTIVITIES (GENERAL)

2.1.3 Connection Denial

The DSC sets outs the conditions for a Distributor to deny connections. The DSC lists reasons for which a Building that "lies along" a distribution line may be refused connection to that line. This section should describe reasons why a distributor may not be obligated to connect the Customer and provide additional details, where relevant, about specific conditions that may result in a refused connection in accordance with the DSC code. For example, the criteria for establishing an unsafe connection or a connection, which adversely affects the system, should be further documented within the Conditions of Service.

The Distribution System Code provides for the ability of a Distributor to deny connections. Toronto Hydro is not obligated to connect a Customer within its service area if the connection would result in any of the following:

- Contravention of existing laws of Canada or the Province of Ontario, including the Ontario Electrical Safety Code
- Violations of conditions in Toronto Hydro's Licence
- Use of a Toronto Hydro distribution system line for a purpose that it does not serve and that Toronto Hydro does not intend to serve
- Adverse affect on the reliability or safety of Toronto Hydro's distribution system
- Public safety reasons or imposition of an unsafe work situation beyond normal risks inherent in the operation of Toronto Hydro's distribution system
- A material decrease in the efficiency of the Toronto Hydro's distribution system
- A materially adverse effect on the quality of distribution services received by an existing connection
- If the person requesting the connection owes Toronto Hydro money for distribution services
- Potential increases in monetary amounts that already are in arrears with Toronto Hydro
- If an electrical connection to Toronto Hydro's distribution system does not meet Toronto Hydro's design requirements
- Any other conditions documented in Toronto Hydro's Conditions.

If Toronto Hydro refuses to connect a Customer in its service area that lies along one of its distribution lines, Toronto Hydro shall inform the person requesting the connection of the reasons for the denial, and where Toronto Hydro is able to provide a remedy, make an Offer to Connect in accordance with Section 2.1.2 of this Conditions. If Toronto Hydro is not capable of resolving the issue, it is the responsibility of the Customer to do so before a connection can be made.

Section 2 – DISTRIBUTION ACTIVITIES (GENERAL)

2.1.4 Inspections Before Connections

In this section, the Distributor should state the requirement for inspection by the Electrical Safety Authority prior to the commencement of electricity supply.

All Customer electrical installations shall be inspected and approved by the Electrical Safety Authority and must also meet Toronto Hydro's requirements. Toronto Hydro requires notification from the Electrical Safety Authority of this approval prior to the energization of a Customer's supply of electricity. Services that have been disconnected for a period of six months or longer must also be re-inspected and approved by the Electrical Safety Authority, prior to reconnection.

Temporary services, typically used for construction purposes and for a period of twelve months or less, must be approved by the Electrical Safety Authority and must be re-inspected should the period of use exceed twelve months.

Customer owned substations must be inspected by both the Electrical Safety Authority and Toronto Hydro.

Transformer rooms shall be inspected and approved by Toronto Hydro prior to the installation of Toronto Hydro's equipment.

Duct banks shall be inspected and approved by Toronto Hydro prior to the pouring of concrete and again before backfilling. The completed ducts must be rodded by the site contractor in the presence of a Toronto Hydro inspector and shall be clear of all extraneous material. A mandrel, approved by Toronto Hydro for a nominal diameter of duct, will be passed through each duct. In the event of ducts blocked by ice, the owner's representative will be responsible for clearing the ducts prior to the cable installation. Connection to existing concrete duct banks or cable chamber shall be done only by a contractor approved by Toronto Hydro. All work done on existing Toronto Hydro's plant must be authorized by Toronto Hydro and carried out in accordance with all applicable safety acts and regulations.

Provision for metering shall be inspected and approved by Toronto Hydro prior to energization.

2.1.5 Relocation of Plant

This section should specify the distributor' s policy with respect to requests for relocation of plant and the conditions under which the requestor is or may be required to pay for the relocation of plant should be specified. Sharing arrangements also should be noted.

When requested to relocate distribution plant, Toronto Hydro will exercise its

Section 2 – DISTRIBUTION ACTIVITIES (GENERAL)

rights and discharge its obligations in accordance with existing acts, by-laws and regulations including the *Public Service Works on Highways Act*, agreements, easements and law. In the absence of existing agreements, Toronto Hydro is not obligated to relocate the plant. However, Toronto Hydro shall resolve the issue in a fair and reasonable manner. Resolution in a fair and reasonable manner shall include consideration of the impact of the proposed relocation on the other Customers of Toronto Hydro. The response to the requesting party shall explain the feasibility or unfeasibility of the relocation and a fair and reasonable charge for relocation based on cost recovery principles.

The Customer shall contact Toronto Hydro prior to undertaking work that may result in an encroachment on Toronto Hydro plant.

If a Customer proposes to:

a) alter existing buildings, structures or apparatus; or
b) construct new buildings, structures or apparatus

that may result in an encroachment on the electrical and working clearances required by Toronto Hydro for the existing Toronto Hydro distribution plant, the Customer shall:

1) Notify Toronto Hydro; and
2) Toronto Hydro will determine in a fair and reasonable manner whether the relocation of the existing distribution plant is acceptable; and
3) If approved, pay for the relocation costs incurred by Toronto Hydro to have the required Toronto Hydro distribution plant relocated, based on cost recovery principles.

If a Customer encroaches upon the electrical and working clearances set by Toronto Hydro, Toronto Hydro shall determine in a fair and reasonable manner whether the Customer shall be required to remove the encroachment at its own expense, or shall pay, based on cost recovery for work required, the costs incurred by Toronto Hydro to have the required distribution plant relocated.

In the course of maintaining and enhancing Toronto Hydro's distribution plant, Toronto Hydro may need to relocate distribution plant that is owned by Toronto Hydro. Costs associated with such relocation(s) shall be borne by Toronto Hydro, except that, in accordance with Section 3.2(g) hereof, if the Customer requests that such maintenance or construction activities be done outside Toronto Hydro's normal working hours, the Customer shall pay for any incremental costs incurred by Toronto Hydro as a result thereof.

Section 2 – DISTRIBUTION ACTIVITIES (GENERAL)

2.1.6 Easements

In this section, any requirements for easements should be described.

To maintain the reliability, integrity and efficiency of the distribution system, Toronto Hydro has the right to have supply facilities on private property and to have easements registered against title to the property. Easements are required where facilities serve property other than property where the facilities are located and/or where Toronto Hydro deems it necessary.

The Customer will prepare at its own cost any required reference plan to the satisfaction of Toronto Hydro. Easement documents are prepared by the Toronto Hydro Legal Services Department. Four copies of the deposited reference plan must be supplied to Toronto Hydro prior to the preparation of the easement documents. Details will be provided upon application for service.

2.1.7 Contracts

This section should outline the types of contracts that are available for each type of Customer, including standard, implied and special contracts. Connection agreements and operating agreements should be listed and referenced as appendices to the Conditions of Service, if applicable.

2.1.7.1 Contract for New or Modified Electricity Service

Toronto Hydro shall only connect a Customer for a new or modified supply of electricity upon receipt by Toronto Hydro of the following:

- a completed and signed contract for service in a form acceptable to Toronto Hydro;
- payment to Toronto Hydro of any applicable connection fee;
- an inspection and approval by the Electrical Safety Authority of the electrical equipment for the new service; and
- a Connection Agreement as requested or required pursuant to Section 2.1.7.4.

2.1.7.2 Implied Contract

In all cases, notwithstanding the absence of a written contract, Toronto Hydro has an implied contract with any Customer that is connected to Toronto Hydro's distribution system and receives distribution services from Toronto Hydro. The terms of the implied contract are embedded in Toronto Hydro's Conditions of Service, the Rate Handbook, Toronto Hydro's rate schedules, Toronto Hydro's licence, the Distribution System Code, the Standard Supply Service Code and the Retail Settlement Code, all as amended from time to time.

Section 2 – DISTRIBUTION ACTIVITIES (GENERAL)

The acceptance of supply of electricity or related services from Toronto Hydro constitutes a binding contract with Toronto Hydro, which includes this Conditions and all terms thereunder. The person so accepting the supply of electricity or related services shall be liable for payment for same, and such contract shall be binding upon such person's heirs, administrators, executors, successors or assigns.

If Toronto Hydro has not received a request to open an account in the name of the occupant of the property, or in the event the electricity is used by a person(s) unknown to Toronto Hydro, then the cost for electricity consumed by such person(s) is due and payable by the owner(s) of such property.

2.1.7.3 Special Contracts

Special contracts that are customized in accordance with the service requested by the Customer normally include, but are not necessarily limited to, the following examples:

- construction sites
- mobile facilities
- non-permanent structures
- special occasions, etc.
- embedded generation facilities

2.1.7.4 Connection Agreements

Toronto Hydro may require a Customer to enter into a Connection Agreement in a form acceptable to Toronto Hydro. Until such time as the Customer executes such a Connection Agreement with Toronto Hydro, the Customer shall be deemed to have accepted and agreed to be bound by all of the terms in the Connection Agreement attached to this as Schedule A in Section 6.

A generator shall enter into a Connection Agreement in a form specified by these Conditions, or otherwise acceptable to Toronto Hydro. Until such time as the generator executes such a Connection Agreement with Toronto Hydro, the generator shall be deemed to have accepted and agreed to be bound by all of the Connection Agreement Terms and Conditions attached to this Conditions as Schedule B3 to Section 6, and the terms of any operating schedule delivered to it from time to time by Toronto Hydro.

A Wholesale Market Participant shall enter into a Connection Agreement in a form acceptable to Toronto Hydro. Until such time as the Wholesale Market Participant executes such a Connection Agreement with Toronto Hydro, the Wholesale Market Participant shall be deemed to have accepted

and agreed to be bound by all of the Connection Agreement Terms and Conditions attached to this Conditions as Schedule C to Section 6, and the terms of any operating schedule delivered to it from time to time by Toronto Hydro.

An Embedded Distributor shall enter into a Connection Agreement in a form acceptable to Toronto Hydro. Until such time as the Embedded Distributor executes such a Connection Agreement with Toronto Hydro, the Embedded Distributor shall be deemed to have accepted and agreed to be bound by all of the terms in this Conditions that apply to such Embedded Distributor.

Toronto Hydro shall make a good faith effort to enter into a Connection Agreement with a distributor connected to Toronto Hydro's distribution system in accordance with the requirements in the Distribution System Code issued by the Ontario Energy Board.

If there is a conflict between a Connection Agreement with a Customer, Generator, Wholesale Market Participant or Embedded Distributor and this Conditions of Service, the Connection Agreement shall govern.

2.1.7.5 Payment by Building Owner

The owner of a Building is responsible for paying for the supply of electricity by Toronto Hydro to the owner's Building except for any supply of electricity to the Building by Toronto Hydro in accordance with a request for electricity by an occupant(s) of the Building.

A Building owner wishing to terminate the supply of electricity to its Building must notify Toronto Hydro in writing. Until Toronto Hydro receives such written notice from the Building owner, the Building owner and/or the occupant(s), as applicable, shall be responsible for payment to Toronto Hydro for the supply of electricity to such Building. Toronto Hydro may refuse to terminate the supply of electricity to an owner's Building when there are occupant(s) in the Building (i.e. during certain periods of the winter).

Where a property has been vacated by an occupant of the property, and Toronto Hydro has not been notified that a new occupant should be billed for the electricity supplied to the property and the owner has not submitted a written request to disconnect the electricity supply, Toronto Hydro will bill the owner for the electricity supply to the property until such time as Toronto Hydro is notified by the owner or a new occupant that the occupant should be billed for the electricity supply.

Section 2 – DISTRIBUTION ACTIVITIES (GENERAL)

2.1.7.6 Opening and Closing of Accounts

A Consumer who wishes to open or close an account for the supply of electricity by Toronto Hydro shall contact Toronto Hydro's Call Centre by phone, by written request (including requests submitted by facsimile), through Toronto Hydro's web site, or other means acceptable to Toronto Hydro.

The Consumer shall be responsible for payment to Toronto Hydro for the supply of electricity to the property up to the date Toronto Hydro is notified of the termination of the account.

2.2 Disconnection

In this section, the Distributor should specify under what circumstances it has the right or obligation to disconnect a Customer. This section also should outline the business processes used by the distributor, including notification and timing provisions.

Toronto Hydro reserves the right to disconnect service for reasons not limited to:

- Contravention of the laws of Canada or the Province of Ontario, including the Ontario's Electrical Safety Code".
- A material adverse effect on the reliability and safety of Toronto Hydro's distribution system.
- Imposition of an unsafe worker situation beyond normal risks inherent in the operation of Toronto Hydro's distribution system.
- A material decrease in the efficiency of Toronto Hydro's distribution system.
- A materially adverse effect on the quality of distribution services received by an existing connection.
- Inability of Toronto Hydro to perform planned inspections and maintenance.
- Failure of the Consumer or Customer to comply with a directive of Toronto Hydro that Toronto Hydro makes for purposes of meeting its licence obligations.
- Overdue amounts payable to Toronto Hydro including the non-payment of a security deposit.
- Electrical disturbance propagation caused by Customer equipment that is not corrected in a timely fashion.
- Any other conditions identified in this Conditions.

Toronto Hydro may disconnect the supply of electricity without notice in accordance with a court order, or for emergency, safety or system reliability reasons.

A Customer intending to demolish any buildings that house Toronto Hydro's distribution equipment shall notify Toronto Hydro at least four (4) months in advance of demolition. The Customer shall pay Toronto Hydro for the costs of

Section 2 – DISTRIBUTION ACTIVITIES (GENERAL)

removing all electrical equipment owned by Toronto Hydro that is located on private property. Provided the Customer has made all necessary arrangements, Toronto Hydro shall remove all its equipment by the date agreed to with the Customer.

2.2.1 Disconnection & Reconnection – Process and Charges

Immediately following the due date, steps will be taken to collect the full amount of the electricity bill. If the bill is still unpaid sixteen calendar days after the due date and seven calendar days after a disconnect notice has been given to the Customer, the service may be disconnected and not restored until payment arrangements satisfactory to Toronto Hydro have been made, including costs of reconnection. Such discontinuance of service does not relieve the Customer of the liability for arrears or other applicable charges for the balance of the term of contract, nor shall Toronto Hydro be liable for any damage to the Customer's premises resulting from such discontinuance of service, other than physical damage to facilities arising directly from entry on the Customer's property. Disconnect notices will be in writing and if given by mail shall be deemed to be received on the third business day after mailing.

Notwithstanding the foregoing, Toronto Hydro shall not shut off the supply of electricity to a property for non-payment as set forth above during such periods as may be prescribed by regulations under the *Electricity Act, 1998*. Upon discovery that a hazardous condition or disturbance propagation (feedback) exists, Toronto Hydro will notify the Customer to rectify the condition at once. If the Customer fails to make satisfactory arrangements to remedy the condition within seven calendar days after a disconnect notice has been given to the Customer, the service may be disconnected and not restored until satisfactory arrangements to remedy the condition have been made. Toronto Hydro shall not be liable for any damage to the Customer's premises resulting from such discontinuance of service, except for physical damage to facilities arising directly from Toronto Hydro's entry on the Customer's property. Disconnect notices will be in writing and if given by mail shall be deemed to be received on the third business day after mailing.

Upon receipt of a Disconnection request by the Customer, Toronto Hydro will disconnect and/or remove Toronto Hydro's connection assets at the Customer's cost as outlined in Table 2 in Section 5 of this Conditions.

Where Toronto Hydro disconnects a customer for non-payment, Toronto Hydro will provide the Fire Safety Notice and any other available related public safety notices, to the person who receives notice of the disconnection.

Customers working within the limits of approach to Toronto Hydro's overhead service conductors shall contact Toronto Hydro Line Protection for a quotation to have the service wires protected. If a disconnection and reconnection is

Section 2 – DISTRIBUTION ACTIVITIES (GENERAL)

required, Toronto Hydro will provide this service for a fee of $730.00 plus GST ($365.00 plus GST for disconnection and $365.00 plus GST for reconnection).

2.2.2 Unauthorized Energy Use

Notwithstanding the provisions of Section 2.1.7.2 (Implied Contract) and Section 2.1.7.5 (Payment by Building Owner), Toronto Hydro reserves the right to disconnect the supply of electricity to a building or property where the building or property has, or appears to have, been used for unlawful purposes, including energy diversion or theft of power. The supply of electricity to the building or property may not be reconnected for the existing customer until Toronto Hydro receives full payment from the existing customer of all reasonable costs and losses incurred by Toronto Hydro arising from the unauthorized energy use, including costs of inspections, repair costs, commodity costs, disconnection costs, and reconnection costs. If other than the existing customer requests reconnection, Toronto Hydro may recover any reconnection charges approved by the Ontario Energy Board.

2.3 Conveyance of Electricity

2.3.1 Limitations on the Guaranty of Supply

In this section, the Distributor should specify its limitations on the guaranty of supply. The Distributor also should reference the provisions for "Powers of Entry" described in section 40 of the Electricity Act, 1998.

Toronto Hydro will endeavour to use reasonable diligence in providing a regular and uninterrupted supply of electricity but does not guarantee a constant supply or the maintenance of unvaried frequency or voltage and will not be liable in damages to the Consumer or Customer by reason of any failure in respect thereof.

Consumers or Customers requiring a higher degree of security than that of normal electricity supply are responsible to provide their own back-up or standby facilities. Consumers or Customers may require special protective equipment at their premises to minimize the effect of momentary power interruptions.

Customers requiring a three-phase supply should 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 Toronto Hydro's electricity supply.

During an emergency, Toronto Hydro may interrupt supply to a Consumer in response to a shortage of supply of electricity, or to effect repairs on its distribution system, or while repairs are being made to Consumer or Customer-

owned equipment. Toronto Hydro shall have rights to access property in accordance with section 40 of the *Electricity Act, 1998* and any successor acts thereto.

To assist with distribution system outages or emergency response, Toronto Hydro may require a Consumer or Customer to provide Toronto Hydro with emergency access to Consumer or Customer-owned distribution equipment that normally is operated by Toronto Hydro or Toronto Hydro-owned equipment on Consumer's property.

2.3.2 Power Quality

This section should outline the guidelines and policies to which the Distributor will endeavor to adhere to in conveying electricity supply, such as service voltage guidelines and outage notification processes. This section also should indicate the process the distributor uses for handling voltage disturbances and power quality testing and remedial action.

This section also should include conditions under which supply of electricity to Customers may be interrupted. Additionally, conditions under which the supply may become unreliable or intermittent should be described.

2.3.2.1 Power Quality Testing

Where a Consumer or Customer provides evidence or data indicating that a power quality or EMI problem may be originating from Toronto Hydro's distribution system, Toronto Hydro will perform investigative analysis to attempt to identify the underlying cause. Depending on the circumstances, this may include review of relevant power interruption data, trend analysis, and power quality monitoring.

Upon determination that the cause resulting in the power quality concern originates from the Toronto Hydro distribution system, where it is deemed a system delivery issue and where industry standards are not met, Toronto Hydro will recommend and/or take appropriate mitigation measures. Toronto Hydro will take appropriate actions to control power disturbances found to be detrimental to the Consumers or Customers. If Toronto Hydro is unable to correct the problem without adversely affecting other Toronto Hydro Consumers or Customers, then it is not obligated to make the corrections. Toronto Hydro will use appropriate industry standards (such as IEC or IEEE standards) and good utility practice as a guideline. If the problem lies on the Customer side of the system, Toronto Hydro may seek reimbursement from the Customer for the costs incurred in its investigation.

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2.3.2.2 Prevention of Voltage Distortion on Distribution

Customers having non-linear load shall not be connected to Toronto Hydro's distribution system unless power quality is maintained by implementing proper corrective measures such as installing proper filters, and/or grounding. Further, to ensure the distribution system is not adversely affected, power electronics equipment installed must comply with IEEE Standard 519-1992. The limit on individual harmonic distortion is 3%, while the limit on total harmonic distortion is 5%.

2.3.2.3 Obligation to Help in the Investigation

If Toronto Hydro determines the Customer's equipment may be the source causing unacceptable harmonics, voltage flicker or voltage level on Toronto Hydro's distribution system, the Customer is obligated to help Toronto Hydro by providing required equipment information, relevant data and necessary access for monitoring the equipment.

The Customer shall assist in the investigation and resolution of power quality problems by:

(a) maintaining and providing Toronto Hydro with a detailed log of exact times and dates of poor power quality;
(b) ensuring corrective measures such as filters and/or grounding are installed for non-linear loads connected to the distribution system;
(c) assisting Toronto Hydro in determining whether the Customer's equipment may be a source of undesirable system disturbances; and
(d) ceasing operation of equipment deemed to be the cause of system disturbances until satisfactory remedial action has been taken;

The Consumer or Customer should be aware that some distribution system events such as capacitor switching may cause problems with highly sensitive equipment, and the Consumer or Customer shall be responsible for mitigating these effects.

2.3.2.4 Timely Correction of Deficiencies

If an undesirable system disturbance is being caused by Customer's equipment, the Customer will be required to cease operation of the equipment until satisfactory remedial action has been taken by the Customer at the Customer's cost. If the Customer does not take such action within a reasonable time, Toronto Hydro may disconnect the supply of electricity to the property.

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2.3.2.5 Notification for Interruptions

Although it is Toronto Hydro's policy to minimize inconvenience to Consumers, it is necessary to occasionally interrupt a Consumer 's supply of electricity to allow work on Toronto Hydro's electrical system. Toronto Hydro will endeavor to provide such Consumers with reasonable notice of planned power interruptions. However, interruption times may change due to inclement weather or other unforeseen circumstances. Toronto Hydro shall not be liable in any manner to such Consumers for failure to provide such notice of planned power interruptions or for any change to the schedule for planned power interruptions.

During an emergency, Toronto Hydro may interrupt supply of electricity to a property without notice in response to a shortage of supply of electricity or to effect repairs on Toronto Hydro's distribution system or while repairs are being made to Customer-owned equipment, or to conduct work of an emergency nature involving the possibility of injury to persons or damage to property or equipment.

2.3.2.6 Notification to Consumers on Life Support

Consumers who require an uninterrupted source of power for life support equipment must provide their own equipment for these purposes. Consumers with life support system are encouraged to inform Toronto Hydro of their medical needs and their available backup power. These Consumers are responsible for ensuring that the information they provide Toronto Hydro is accurate and up-to-date.

With planned interruptions, the same procedure as prescribed in section 2.3.2.5 will be observed. For those unplanned power interruptions that extend beyond two hours and the time expected to restore power is longer than what was indicated by Consumers (registered on life support) as their available backup power, Toronto Hydro will endeavor to contact these Consumers but will not be liable in any manner to the Consumers for failure to do so.

2.3.2.7 Emergency Interruptions for Safety

Toronto Hydro will endeavour to notify Consumers prior to interrupting the supply of electricity. However, if an unsafe or hazardous condition is found to exist, or if the use of electricity by apparatus, appliances, or other equipment is found to be unsafe or potentially damaging to Toronto Hydro or the public, the supply of electricity may be interrupted without notice.

Section 2 – DISTRIBUTION ACTIVITIES (GENERAL)

2.3.2.8 Emergency Service (Trouble Calls)

Toronto Hydro will exercise reasonable diligence and care to deliver a continuous supply of electricity to the Consumer. However, Toronto Hydro cannot guarantee a supply that is free from interruption.

When power is interrupted, the Consumer should first ensure that failure is not due to blowing of fuses within the installation. If there is a partial power failure, the Consumer should obtain the services of an electrical contractor to carry out necessary repairs. If, on examination, it appears that Toronto Hydro's main source of supply has failed, the Consumer should report these conditions at once to Toronto Hydro's Call Centre by calling 416-542-8000.

Toronto Hydro operates a Call Centre 24 hours a day to provide emergency service to Consumers. Toronto Hydro will initiate restoration efforts as rapidly as practicable.

2.3.2.9 Outage Reporting

Depending on the outage, duration and the number of Consumers affected, Corporate Communications of Toronto Hydro may issue a news release to advise the general public of the outage. In turn, news radio stations may call for information on a 24-hour basis when they hear of an outage.

2.3.3 Electrical Disturbances

This section should outline the guidelines to which the Distributor and the Customer will be expected to adhere to regarding electrical disturbances.

Toronto Hydro shall not be held liable for the failure to maintain supply voltages within standard levels due to Force Majeure as defined in Section 2.3.5 of this Conditions.

Voltage fluctuations and other disturbances can cause flickering of lights and other serious difficulties for Consumers connected to Toronto Hydro's distribution system. Customers must ensure that their equipment does not cause disturbances such as harmonics and spikes that might interfere with the operation of adjacent Consumer equipment. Equipment that may cause disturbances includes large motors, welders and variable speed drives, etc. In planning the installation of such equipment, the Customer must consult with Toronto Hydro.

Some types of electronic equipment, such as video display terminals, can be affected by the close proximity of high electrical currents that may be present in

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transformer rooms. Toronto Hydro will assist in attempting to resolve any such difficulties at the Customer's expense.

Consumers who may require an uninterrupted source of power supply or a supply completely free from fluctuation and disturbance must provide their own power conditioning equipment for these purposes.

2.3.4 Standard Voltage Offerings

This section should specify the voltages that the distributor may provide to each type of Customer, based on their supply requirements. This section should include both the primary and secondary voltages that are available. Additionally, any physical or geographic constraints on a particular voltage, or conditions under which voltages may not be provided should be detailed in this section.

2.3.4.1 Primary Voltage

The primary voltage to be used will be determined by Toronto Hydro for both Toronto Hydro-owned and Customer-owned transformation. Depending on the voltage of the plant that "lies along", the preferred primary voltage will be at 27.6/ 16 kV grounded wye, three phase, four-wire system. However, in the downtown core of the City of Toronto the primary voltage will be 13.8/8 kV grounded wye, three phase, four wire; or 13.8 kV three phase, three wire, depending on the area.

2.3.4.2 Supply Voltage

Depending on the voltage of the plant that "lies along" Toronto Hydro's distribution system, the preferred secondary voltage will be at 120/240 V, single phase, and 208/120 V, 600/347 V, three phase. Depending on the system availability in the area, 208/120 V two phase, three wire may be supplied in place of 120/240 V.

The supply voltage governs the limit of supply capacity for any Customer.

When supply is from secondary street circuits the demand load shall be as follows:

(i) residential: at 120/240 V, single phase; 208/120 V, two phase, three wire up to 200A service size, or

residential: at 120/240 V, single phase; 208/120 V, two phase, three wire, 400A service size feeding from the overhead distribution system, must be connected directly to transformation via underground supply arrangement, or

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commercial: at 120/240 V, single phase; 208/120 V, two phase, three wire up to 75 kVA demand load, or

(ii) at 600/347 V, three phase, four wire up to 80 kVA demand load, or

(iii) at both 120/240 V, single phase and 600/347 V, three phase, four wire up to 100 kVA sum total demand load, or

(iv) at 208/120 V, three phase, four wire up to 100 kVA demand load,

For supply exceeding the above capacity, the Customer is required to provide a transformer, pad mounted or in a building vault, on private property to receive supply of electricity up to the following capacities:

When a pad-mounted transformer is used the demand load shall be as follows:

(i) fed from 4.16/2.4 kV primary at 208/120 V or 600/347 V, three phase, four wire supply is available for loads up to 300 kVA demand load, or

(ii) fed from 13.8/8 kV primary at 208/120 V or 600/347 V, three phase, four wire supply is available for loads up to 750 kVA demand load, or

(iii) fed from 27.6/16 kV primary at 208/120 V or 600/347 V, three phase, four wire, supply is available for loads up to 750 kVA and 1500 kVA demand load respectively.

When a transformer vault is used:
fed from 4.16/2.4 kV primary at 208/120 V or 600/347 V, three phase, four wire supply is available for loads up to 300 kVA demand load,

(i) fed from 13.8/8 kV primary at 208/120 V or 600/347 V, three phase, four wire, supply is available for loads up to 1500 kVA or and 2500 kVA demand load respectively depending on system availability in the area, (i.e. three phase),

(ii) fed from 27.6/16 kV primary at 208/120 V or 600/347 V, three phase, four wire, supply is available for loads up to 1500 kVA and 2500 kVA demand load respectively (i.e. three phase).

When the Customer requires voltages other than at the available supply voltage, or demands by a single occupant exceed the limits indicated above, the Customer shall consult with Toronto Hydro. Toronto Hydro may advise the Customer of any special conditions and requirements to obtain such non-

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standard services. However, Toronto Hydro is under no obligations to provide any non-standard services.

When supply is available from the underground network system, permissible demand load will depend upon the local capacity of the system and specific circumstances. Should a new service or a change in service involving the network system not be possible then the requirements for a Customer to provide transformation as detailed in the rest of this section 2.3.4.2 still apply.

2.3.4.3 Multiple Connections to Main Distribution System

Customers will be generally connected to one point of the main Toronto Hydro distribution system. Toronto Hydro may offer a second point of connection to another point of the main Toronto Hydro distribution system when:

a) the Customer is fed by the 13.8 kV underground radial system as defined in section 1.1.1 or
b) the Customer's point load exceeds the maximum set in section 2.3.4.2 for service from a transformer vault.

In the case of Customers supplied from the 13.8 kV underground radial system, Customers will not be eligible to ask for service from Sketch 1(h) unless the demand exceeds the limit set for transformer vaults as set out in section 2.3.4.2.

Where multiple connections exist, and unless otherwise agreed by Toronto Hydro, load should be distributed evenly across all active connections. Load must not be transferred from one active connection to another without the permission of Toronto Hydro.

Toronto Hydro will determine the location of any connection points to its main distribution system. Although Toronto Hydro will give consideration to arguments relating to a need for diversity of supply, it retains the right to determine in its sole discretion, not to allow a second point of connection to another part of the main distribution system.

2.3.5 Voltage Guidelines

This section should specify what voltages the distributor' s Customers can reasonably expect, with reference to CSA Standard CAN3-235 current edition.

Toronto Hydro maintains service voltage at the Customer's service entrance within the guidelines of C.S.A. Standard CAN3-C235-83 (or latest edition), which allows variations from nominal voltage as shown on the table below:

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Nominal Voltage	Voltage Variation Limits			
	Extreme Operating Conditions			
		Normal Operating Conditions		
Single Phase				
120/240	106/212	110/220	125/250	127/254
Three Phase 4 Wire				
208/120	190/110	194/112	216/125	220/127
416/240 (*)	220/380	224/388	250/432	254/440
600/347	530/306	550/318	625/360	635/367

(*) 416/240 is no longer a standard voltage offered by Toronto Hydro

Where voltages lie outside the indicated limits for Normal Operating Conditions but within the indicated limits for Extreme Operating Conditions as noted above, improvement or corrective action will be taken by Toronto Hydro 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 should 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, the extent to which limits are exceeded with respect to voltage levels and duration, etc.

Toronto Hydro shall practice reasonable diligence in maintaining voltage levels, but is not responsible for variations in voltage from external forces such as operating contingencies, exceptionally high loads and low voltage supply from the transmitter or host distributor. Toronto Hydro shall not be liable for any delay or failure in the performance of any of its obligations under this Conditions due to any events or causes beyond the reasonable control of Toronto Hydro, including, without limitation, severe weather, flood, fire, lightning, other forces of nature, acts of animals, epidemic, quarantine restriction, war, sabotage, act of a public enemy, earthquake, insurrection, riot, civil disturbance, strike, restraint by court order or public authority, or action or non-action by or inability to obtain authorization or approval from any governmental authority, or any combination of these causes ("Force Majeure").

2.3.6 Emergency Back-up Generation Facilities

Distributors should include the following statements in this section:

- ***Customers with portable or permanently connected emergency generation capability shall comply with all applicable criteria of the Ontario Electrical Safety Code and in particular, shall ensure that Customer emergency generation does not back feed into the Distributor's system.***

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- ***Customers with permanently connected emergency generation equipment shall notify their Distributor regarding the presence of such equipment.***

Any other requirements the Distributor imposes on Customers with emergency backup generation facilities should be described in this section.

Customers or Consumers with a portable or permanently connected backup generation facility (including an embedded generation facility that is used exclusively for load displacement purposes) shall comply with all applicable criteria of the Ontario Electrical Safety Code. In particular, the Customer or Consumer shall ensure that the backup generation facility does not parallel with Toronto Hydro's system without a proper interface protection and an appropriate Connection Agreement, and does not adversely affect Toronto Hydro's distribution system.

Customers considering installing a Closed-Transition switch shall notify Toronto Hydro and shall submit a protection study that satisfies Toronto Hydro's technical requirements. The Customer shall obtain a written approval from Toronto Hydro prior to operation of the switch in closed transition mode. Closed-Transition switches must not parallel the generator with Toronto Hydro's distribution system for longer than 100 ms under any circumstances. Customers or Consumers with permanently connected backup generation facility shall notify Toronto Hydro regarding the presence of such equipment and shall enter into such agreements as may be requested, or required, under this Conditions.

2.3.7 Metering

This section should specify the options available to a Customer for metering equipment. The Distributor also should outline the technical requirements for meter installations including location and associated main switch.

Toronto Hydro will supply, install, own, and maintain all meters, instrument transformers, ancillary devices, and secondary wiring that are required for revenue metering.

An Ontario Energy Board-licensed generator connected to the Toronto Hydro distribution system that sells energy and settles through the Toronto Hydro retail settlement process shall install a four-quadrant interval meter.

A Customer with an embedded generation facility connected to the Toronto Hydro distribution system shall install its own meter in accordance with the Toronto Hydro metering requirements. The Customer shall obtain a written approval from Toronto Hydro with respect to technical details of the metering installation.

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Where practical, metering for an embedded generation facility shall be installed at the point of supply. If it is not practical to install the meter at the point of supply, Toronto Hydro will apply loss factors to the generation output in accordance with the loss factors applied for retail settlements and billing.

Where an embedded generation facility metering installation does not conform to Measurement Canada standards or the Customer cannot confirm accuracy class of its instrument transformers, the Customer shall have the metering installation, including instrument transformers, tested, and provide satisfactory test results to Toronto Hydro. Toronto Hydro will apply a Measurement Canada correction factor to meter readings until such time as standards conformance is achieved.

Metered Market Participants in the Independent Electricity Market Operator ("IESO") administered wholesale market must meet or exceed all IESO metering requirements. All Embedded Generation Facilities of 10 MW or larger must meet or exceed all IESO metering requirements.

2.3.7.1 General

Describe the Distributor's access to meter installation requirements here.

Toronto Hydro will typically install metering equipment at the Customer supply voltage. The Customer must provide a convenient and safe location, satisfactory to Toronto Hydro, for the installation of meters, wires and ancillary equipment. Meters for new or upgraded residential services will be mounted outdoors on a meter socket approved by Toronto Hydro.
No person, except those authorized by Toronto Hydro, may remove, connect, or otherwise interfere with meters, wires, or ancillary equipment owned by Toronto Hydro.

The Customer will be responsible for the care and safekeeping of Toronto Hydro meters, wires and ancillary equipment on the Customer's premises. If any Toronto Hydro equipment installed on Customer premises is damaged, destroyed, or lost other than by ordinary wear and tear, tempest or lightning, the Customer will be liable to pay to Toronto Hydro the value of such equipment, or at the option of Toronto Hydro, the cost of repairing the same.

The location allocated by the owner for Toronto Hydro metering shall provide direct access for Toronto Hydro staff and shall be subject to satisfactory environmental conditions, some of which are:

- Maintain a safe and adequate working space in front of equipment, not less than 1.2 metres (48") and a minimum ceiling height of 2.1 metres (84")

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- Maintain an unobstructed working space in front of equipment, free from, or protected against, the adverse effects of moving machinery, vibration, dust, moisture or fumes

Where Toronto Hydro deems self-contained meters to be in a hazardous location, the Customer shall provide a meter cabinet or protective housing.

Any compartments, cabinets, boxes, sockets, or other workspace provided for the installation of Toronto Hydro's metering equipment shall be for the exclusive use of Toronto Hydro. No equipment, other than that provided and installed by Toronto Hydro, may be installed in any part of the Toronto Hydro metering workspace.

2.3.7.1.1 Metering Requirements for Multi-Unit Residential Rental Buildings and Condominiums

Developers of new multi-unit residential rental buildings and new and existing condominiums (collectively, "MURBs"), or boards of directors of condominiums, may choose to have Toronto Hydro install smart suite metering, or to have Toronto Hydro install a bulk interval meter for the purpose of enabling smart sub-metering by a licensed sub-metering service provider.

Installation of Smart Metering by Toronto Hydro

Upon the request of a MURB developer or a condominium board of directors, Toronto Hydro will install smart metering that meets the functional specification of Ontario Regulation 425/06 – *Criteria and Requirements for Meters and Metering Equipment, Systems and Technology* (suite metering). In that case, each separate residential and commercial unit, as well as common areas, will become direct individual customers of Toronto Hydro, with the common area accounts held by the developer, condominium corporation or the landlord as the case may be.

The MURB developer or condominium board of directors may choose an Alternative Bid for the installation of suite metering. In that case, the MURB developer, landlord or condominium board of directors is required to:

(i) select and hire a qualified contractor;
(ii) ensure all contestable work is done in accordance with Toronto Hydro's technical standards and specifications: and
(iii) assume full responsibility for the installation and warranty all aspects for a period of 2 years from date of commissioning.

Where the MURB developer or condominium board of directors transfers the metering facilities installed under the alternative bid option to Toronto Hydro, and provided Toronto Hydro has inspected and approved the facilities installed, Toronto Hydro shall pay the condominium corporation, landlord or developer a transfer price. The transfer price shall be the lower of the cost to the MURB developer or condominium board of directors to install the metering facilities or Toronto Hydro's fully allocated cost to install the metering facilities.

Common Area Metering

Where units in a MURB are to be suite metered, the responsible party (MURB developer, condominium board of directors, or landlord) shall enter into a contract with Toronto Hydro for the supply of electrical energy for all common or shared services. Common or shared services typically include lighting of all common areas shared by the tenants, or unit owners, and common services such as heating, air conditioning, water heating, elevators, and common laundry facilities. In such cases, consumption for all common areas will be separately metered.

Installation of Bulk Interval Metering by Toronto Hydro

Where bulk interval metering is supplied by Toronto Hydro to an exempt distributor for the purpose of enabling sub-metering, the responsible party (i.e., the developer, condominium corporation, or landlord, but not the sub-metering provider) shall enter into a contract with Toronto Hydro for the supply of electrical energy to the building.

2.3.7.1.2 Main Switch and Meter Mounting Devices

The Customer's main switch immediately preceding the meter shall be installed so that the top of the switch is 1.83 m or less from the finished floor and shall permit the sealing and padlocking of:

(a) the handle in the "open" position; and
(b) the cover or door in the closed position.

Meter mounting devices for use on Commercial/Industrial accounts shall be installed on the load side of the Customer's main switch and be located indoor.

The Customer is required to supply and install a Toronto Hydro approved meter socket for the use of Toronto Hydro's self-contained socket meters for the main switch ratings and supply voltages listed in Table 5 in Section 5 of this Conditions.

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The Customer is required to supply and install a meter cabinet to contain Toronto Hydro's metering equipment for the main switch ratings and supply voltages listed in Table 6 in Section 5 of to this Conditions.

Meter centers installed for individual metering applications must meet the requirements specified in Table 8 in Section 5 of to this Conditions.

The Customer shall permanently and legibly identify each metered service with respect to its specific address, including unit or apartment number. The identification shall be applied to all service switches, circuit breakers, meter cabinets, and meter mounting devices.

2.3.7.1.3 Service Mains Limitations

The metering provision and arrangement for service mains in excess of either 600 A or 600 V shall be submitted to Toronto Hydro for approval before building construction begins. Additional standards and requirements for services metered above 600 V can be made available upon request.

2.3.7.1.4 Special Enclosures

Specially constructed meter entrance enclosures will be permitted for outdoor use upon Toronto Hydro's approval of a written application for use.

2.3.7.1.5 Meter Cables

The Customer shall provide meter loops having a length of 610-mm in addition to the length between line and load entry points.
Line and load entry points shall be approved by Toronto Hydro prior to installation. Where more than two conductors per phase are used, the connectors shall be provided by the Customer (see Table 6 in Section 5 of this Conditions for required cabinets). Mineral insulated, solid or hard drawn wire conductors are not acceptable for meter loops.

Any variation from the above must first be checked and approved by Toronto Hydro prior to installation.

2.3.7.1.6 Barriers

Barriers are required in each section of switchgear or service entrance equipment between metered and unmetered conductors and/or between sections reserved for Toronto Hydro use and sections for Customer use.

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2.3.7.1.7 Doors

Side-hinged doors shall be installed over all live electrical equipment where Toronto Hydro personnel may be required to work (i.e. line splitters, unmetered sections of switchgear, breakers, switches, metering compartments, meter cabinets and enclosures). These hinged doors shall have provision for sealing and padlocking. Where bolts are used, they shall be of the captive knurled type. All outer-hinged doors shall open no less than 135°. All inner-hinged doors shall open to a full 90°.

2.3.7.1.8 Auxiliary Connections

All connections to circuits such as fire alarms, exit lights and Customer instrumentation shall be made to the load side of Toronto Hydro's metering. No Customer equipment shall be connected to any part of the Toronto Hydro metering circuit.

2.3.7.1.9 Working Space

Clear working space shall be maintained in front of all equipment and from all side panels in accordance with the Ontario Electrical Safety Code.

2.3.7.2 Current Transformer Boxes

Where current transformers are required, the Distributor should outline the technical requirements to be followed for such installations.

Where instrument transformers are incorporated in low voltage switchgear, the size of the chamber and number of instrument transformers shall be as shown in Table 7 in Section 5 of to this Conditions. A separate meter cabinet must be supplied and installed by the Customer, located to the satisfaction of Toronto Hydro and as close as possible to the instrument transformer compartment.

The cabinet and the compartment will be connected by an empty 1½ inch conduit, the length of which shall not exceed 30 m, and which shall include a maximum of three 90° bends. The conduit will be provided for the exclusive use of Toronto Hydro. No fittings with removable covers are permitted.

The meter cabinet shall be grounded by a minimum #6 copper grounding conductor, not installed in the above conduit. The Customer shall install a

strong nylon or polyrope pull line in the conduit, with an excess of 1500 mm loop left at each end.

The final layout and arrangements of components must be approved by Toronto Hydro prior to fabrication of equipment.

Where two or more circuits are totalized, or where remote totalizing is involved, or where instrument transformers are incorporated in high voltage switchgear (greater than 750 V), Toronto Hydro will issue specific metering requirements.

2.3.7.3 Interval Metering

Where interval metering is required or requested, the Distributor should outline the technical requirements to be followed for such installations. Included with the technical specifications should be the conditions under which interval metering will be supplied.

Interval meters will be installed for all new or upgraded services where the peak demand is forecast to be 200 kW or greater, or for any Customer wishing to participate in the spot market pass-through pricing. Prior to the installation of an interval meter, the Customer must provide a ½ inch conduit from their telephone room to the meter cabinet. Toronto Hydro will arrange for the installation of a telephone line, terminated in the meter cabinet for the exclusive use of Toronto Hydro to retrieve interval meter data. The Customer will be responsible for the installation of the telephone infrastructure and ongoing monthly costs of operating the phone line. The phone line will be Toronto Hydro owned, direct dial, voice quality, active 24 hours per day, and energized prior to meter installation.

Other Customers that request interval metering shall compensate Toronto Hydro for all incremental costs associated with that meter, including the capital cost of the interval meter, installation costs associated with the interval meter, ongoing maintenance (including allowance for meter failure), verification and reverification of the meter, installation and ongoing provision of communication line or communication link with the Customer's meter, and cost of metering made redundant by the Customer requesting interval metering.

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2.3.7.4 Meter Reading

This section should outline the requirements for access to meters for the purposes of obtaining readings and the process to be used if a reading is not obtained.

The Customer or Consumer must provide or arrange free, safe and unobstructed access during regular business hours to any authorized representative of Toronto Hydro for the purpose of meter reading, meter changing, or meter inspection. Where premises are closed during Toronto Hydro's normal business hours, the Customer or Consumer must, on reasonable notice, arrange such access at a mutually convenient time.

2.3.7.5 Final Meter Reading

This section should outline any requirements associated with obtaining a final meter reading on termination of a contract for service.

When a service is no longer required, the Customer or Consumer shall provide sufficient notice of the date the service is to be discontinued so that Toronto Hydro can obtain a final meter reading as close as possible to the final reading date. The Customer or Consumer shall provide access to Toronto Hydro or its agents for this purpose. If a final meter reading is not obtained, the Consumer shall pay a sum based on an estimated demand and/or energy for electricity used since the last meter reading, as determined by Toronto Hydro.

2.3.7.6 Faulty Registration of Meters

In this section, the Distributor should outline the process for dealing with metering errors.

Metering electricity usage for the purpose of billing is governed by the federal Electricity and Gas Inspection Act and associated regulations, under the jurisdiction of Measurement Canada, Industry Canada. Toronto Hydro's revenue meters are required to comply with the accuracy specifications established by the regulations under the above Act.

In the event of incorrect electricity usage registration, Toronto Hydro will determine the correction factors based on the specific cause of the metering error and the Consumer's electricity usage history. The Consumer shall pay for all the electricity supplied a reasonable sum based on the reading of any meter formerly or subsequently installed on the premises by Toronto Hydro, due regard being given to any change in the characteristics of the installation

and/or the demand. If Measurement Canada, Industry Canada determines that the Consumer was overcharged, Toronto Hydro will reimburse the Consumer for the amount incorrectly billed.

If the incorrect measurement is due to reasons other than the accuracy of the meter, such as incorrect meter connection, incorrect connection of auxiliary metering equipment, or incorrect meter multiplier used in the bill calculation, the billing correction will apply for the duration of the error. Toronto Hydro will correct the bills for that period in accordance with the regulations under the Electricity and Gas Inspection Act.

2.3.7.7 Meter Dispute Testing

This section should outline the process by which a Customer can dispute a meter measurement or read and seek redress.

Metering inaccuracy is an extremely rare occurrence. Most billing inquiries can be resolved between the Customer or Consumer and Toronto Hydro without resorting to the meter dispute test.

Either Toronto Hydro or the Customer or Consumer may request the service of Measurement Canada to resolve a dispute. If the Customer or Consumer initiates the dispute, Toronto Hydro will charge the Customer or Consumer a meter dispute fee if the meter is found to be accurate and Measurement Canada rules in favor of the utility.

2.4 Tariffs and Charges

2.4.1 Service Connection

The Distributor should outline the rates that have been established for providing the Customer with a connection to the electrical distribution system and all services provided by the Distributor as per the rules and regulations laid out by all applicable codes.

Charges for distribution services are made as set out in the Schedule of Rates available from Toronto Hydro. Notice of Rate revisions shall be published in major local newspapers. Information about changes will also be mailed to all Consumers with the first billing issued at revised rates.

2.4.1.1 Customers Switching to Retailer

There are no physical service connection differences between Standard Service Supply (SSS) customers and third party retailers' customers. The supply of electricity to both types of customers is delivered through Toronto Hydro's distribution system with the same distribution requirements.

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Therefore, all service connection requirements applicable to the SSS customers are applicable to third party retailers' customers.

2.4.2 Energy Supply

This section should outline the process the Distributor has established for the following:

- ***Provision of Standard Service Supply to the Customer, per the rules and regulations laid out in the Retail Settlement Code and the Standard Service Supply Code.***
- ***Provision of Supply to the Customer through a Retailer, per the rules and regulations laid out in the Retail Settlement Code.***
- ***Wheeling of energy and all associated tariffs.***

2.4.2.1 Standard Service Supply (SSS)

All Toronto Hydro Consumers are Standard Service Supply (SSS) Consumers until Toronto Hydro is informed by the Consumer or the Consumer's authorized retailers of their switch to a competitive electricity supplier. The Service Transfer Request (STR) must be made by the Consumer or the Consumer's authorized retailer.

2.4.2.2 Retailer Supply

Consumers transferring from Standard Service Supply (SSS) to a retailer shall comply with the Service Transfer Request (STR) requirements as outlined in sections 10.5 through 10.5.6 of the Retail Settlement Code. All requests shall be submitted as electronic file and transmitted through EBT Express. Service Transfer Request (STR) shall contain information as set out in section 10.3 of the Retail Settlement Code.

If the information is incomplete, Toronto Hydro shall notify the retailer or Consumer about the specific deficiencies and await a reply before proceeding to process the transfer.

2.4.2.3 Wheeling of Energy

All Customers or Consumers considering delivery of electricity through the Toronto Hydro distribution system are required to contact Toronto Hydro for technical requirements and applicable tariffs.

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2.4.3 Deposits

This section should outline any deposit and prudential requirements the Distributor has established for providing a Customer with Distribution Services, supply through Standard Service Supply or through a Retailer, per the rules and regulations laid out in the Distribution System Code.

Whenever required by Toronto Hydro, including, but not limited to, as a condition of supplying or continuing to supply Distribution Services, Consumers and Customers shall provide and maintain security in an amount that Toronto Hydro deems necessary and reasonable. Toronto Hydro will not discriminate among customers with similar risk profiles or risk related factors except where expressly permitted under the Distribution System Code.

Except for Consumers or Customers who meet the security deposit waiver conditions described below, all Consumers or Customers are required to provide an account security deposit to Toronto Hydro, which, at the Consumer's or Customer's election, must be in the form of (i) cash, cheque or Money Order, or, if approved by Toronto Hydro, Visa or MasterCard or (ii) for non residential Consumers or Customers an automatically renewing irrevocable commercial letter of credit from a bank defined in the *Bank Act, 1991*, c.46. Toronto Hydro will not accept third party guarantees.

The amount of the account security deposit will be based on the billing factor times the estimated average bill during the most recent 12 months. The billing factors are as follows:

- 2.5 for monthly billed Consumers or Customers
- 1.75 for bi-monthly billed Consumers or Customers

Where there is no established historical electricity consumption information for the service premises, the deposit will be based on a reasonable estimate using information from a like property used for similar purposes.

Where the Consumer or Customer has one disconnection in the relevant period, the highest bill in the period will be used for the calculation of the deposit. The maximum amount determined by this calculation may not be exceeded

If requested by the Consumer or Customer, Consumers or Customers will be permitted to pay the security deposit in equal installments over a maximum of 4 months.

The electricity service is subject to disconnection when over fifty percent of the security deposit remains unpaid or a payment arrangement is not honoured.

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The security deposit may be waived based on the following criteria:

(a) The Consumer or Customer has a good payment history based on the most recent customer history with some portion in the most recent 24 months, during which time the Consumer or Customer:

- had no more than one (1) notice of disconnection; AND
- had no more than one (1) payment returned for insufficient funds ("NSF"); AND
- had no disconnect/collection trip.

The minimum time period for good payment history is as follows:

- Residential - 1 year
- Non-residential <50 kW demand rate class - 5 years
- All other classes - 7 years

or

(b) The Consumer or Customer provides a letter from another electricity or gas distributor in Canada confirming good payment history. The letter must contain information consistent with the good payment criteria described in this document.

or

(c) The Consumer or Customer (other than those in a >5000 kW demand rate class) provides a satisfactory credit check at its expense. The acceptable Equifax Credit scores are as follows:

- ***Residential*** - Consumer Score of 700 or greater
- ***Business*** - Commercial Score of 20 or lower

or

(d) Residential account deposits may be waived where the Consumer or Customer enrolls in the Toronto Hydro's pre-authorized payment plan and supplies at least two pieces of identification information, provided that a deposit will be required if the pre-authorized payment plan is cancelled.

or

(e) The customer is a bulk-metered residential condominium as defined in the Condominium Act, 1998 and has provided Toronto Hydro with a signed declaration attesting to their legal status as a residential condominium corporation.

The security deposit may be reduced for non residential Consumers or Customers with 50 kW or greater demand, based on the following criteria:

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Where the Consumer or Customer has a credit rating from a recognized credit rating agency, (Dominion ***Bond Rating Service, Standard & Poors or Moody's***) the maximum amount of deposit required will be reduced as follows:

Credit Rating (Using Standard & Poor's Rating Terminology	**Allowable Reduction**
AAA- and above	100%
AA-, AA, AA+	95%
A-, From A, A+ to below AA	85%
BBB-, From BBB, BBB+ to below A	75%
Below BBB-	0%

Equivalent ratings from other bond rating agencies would apply for the same reductions.

In the above case, the commodity price used to calculate the deposit shall be the same as the price used by the IESO for the purpose of determining maximum net exposures and prudential support obligations for market participants other than distributors, low-volume Consumers and designated Consumers.

Interest will accrue monthly on security deposits commencing when the total deposit has been received. The rate shall be at the average Chartered Bank Prime Rate as published on the Bank of Canada Web site, less 2%. The interest rate shall be updated by Toronto Hydro at a minimum on a quarterly basis. The interest will be calculated and applied to the existing deposit prior to each update and at a minimum on a yearly basis.

Toronto Hydro will undertake an annual review of all security deposit requirements for each Consumer or Customer based on the ***Good Payment History*** described in this document.

- Where it is determined that all or part of the deposit is no longer required, the account will be credited with the amount of the deposit plus accumulated interest.

- Where it is determined that a deposit is now required or needs to be adjusted upward, the amount of the deposit will be added to the next regular bill and is payable by the due date of that bill. As with all outstanding balances payment arrangements that are satisfactory to Toronto Hydro may be made.

- For Consumers or Customers in the >5000 kW demand rate class, where the Consumer or Customer is in a position to have some or all of the deposit refunded, only 50% of the deposit will be returned. A higher refund requires

a credit rating from a recognized credit rating agency based on the criteria previously stated.

Note: Where no deposit is on file or there is a deposit that does not meet the maximum amount, and the Consumer or Customer meets the good payment history criteria but does not meet the time frame, a new or increased deposit amount will not be added.

Upon closure of the Consumer's or Customer's account with Toronto Hydro, including a Consumer or Customer move from standard supply service ("SSS") to a competitive retailer where the retailer is performing the billing function (retailer consolidated billing), for all accounts types, the balance of the security deposit plus accumulated interest, after all amounts owing are paid, will be returned to the Consumer or Customer within six weeks of the closure of the account.

No earlier than 12 months after the payment of a security deposit or the making of a prior demand for a review, a Consumer or Customer may request in writing that the deposit amount be reviewed to determine whether the entire amount of the security deposit, or some portion of it, should be returned to the Consumer or Customer as it is no longer required.

2.4.4 Billing

This section should outline the billing methods and billing cycles the Distributor has established to provide a Customer with Distribution Services, supply through Standard Service Supply or through a Retailer, per the rules and regulations laid out in the Retail Settlement Code.

Toronto Hydro may, at its option, render bills to its Customers on either a monthly, every two months, quarterly or annual basis. Bills for the use of electrical energy may be based on either a metered rate or a flat rate, as determined by Toronto Hydro.

A Customer may elect aggregated billing for multiple services provided all of the following conditions are met:

- the premises and businesses are situated on one contiguous parcel of land i.e. not separated by public roadway
- all premises are under one ownership
- the services are supplied at the same voltage
- the meters are of the interval type, allowing logical totalization of the coincident demands. If interval meters are not already in place, the Customer will install the necessary equipment, at the Customer's own cost, to Toronto Hydro specifications.

Section 2 – DISTRIBUTION ACTIVITIES (GENERAL)

The Customer may dispute charges shown on the Customer's bill or other matters by contacting and advising Toronto Hydro of the reason for the dispute. Toronto Hydro will promptly investigate all disputes and advise the Customer of the results.

2.4.5 Payments and Overdue Account Interest Charges

This section should outline payment methods that the Distributor has established to provide the Customer with Distribution Services, supply through Standard Service Supply or through a Retailer as per the rules and regulations laid out in the Retail Settlements Code.

Bills are rendered for energy services provided to the Consumer. Bills are payable in full by the due date; otherwise, overdue interest charge will apply. Where a partial payment has been made by the Consumer on or before the due date, the interest charge will apply only to the amount of the bill outstanding at the due date. In the event of partial payment by a Customer, payments shall be allocated by the portions of the bill covering competitive and non-competitive electricity costs based on the ratios of the amount billed for competitive and non-competitive costs.

Outstanding bills are subject to the collection process and may ultimately lead to the service being discontinued. Service will be restored once satisfactory payment has been made. Discontinuance of service does not relieve the Customer of the liability for arrears.

Toronto Hydro shall not be liable for any damage on the Customer's premises resulting from such discontinuance of service, except for physical damage to facilities arising directly from Toronto Hydro's entry on the property. A reconnection charge will apply where the service has been disconnected due to non-payment.

The Customer will be required to pay additional charges for the processing of non-sufficient fund (N.S.F.) cheques.

Customers will be required to pay special charges, on request, which may arise from a variety of conditions such as:

Transfer Charge. A change of occupancy charge will apply to all accounts taken over by a new Consumer.

Collection Charge. It is sometimes necessary, for the Customer's convenience, for a Toronto Hydro employee to visit a Consumer's premises to collect payment for an account. There will be a charge for this service.

Section 2 – DISTRIBUTION ACTIVITIES (GENERAL)

Reconnection Charge. A Consumer or Customer disconnected for non-payment shall be required to pay a reconnection fee.

2.5 Customer Information

The Conditions of Service shall describe the provision of information with respect to chapter 11 of the Retail Settlement Code. This specifies the rights of Consumers and retailers to access current and historical usage information and related data and the obligations of distributors in providing access to such information. The Conditions of Service should include reference to include information subject to privacy regulations and load profile information.

Any processes for handling requests for information outside of the requirements of the Retail Settlement Code should be described in this section.

A third party who is not a retailer may request historical usage information with the written authorization of the Consumer to provide their historical usage information.

Toronto Hydro will provide information appropriate for operational purposes that has been aggregated sufficiently, such that an individual's Consumer information cannot reasonably be identified, at no charge to another distributor, a transmitter, the IESO or the OEB. Toronto Hydro may charge a fee that has been approved by the OEB for all other requests for aggregated information.

At the request of a Consumer, Toronto Hydro will provide a list of retailers who have Service Agreements in effect within its distribution service area. The list will inform the Consumer that an alternative retailer does not have to be chosen in order to ensure that the Consumer receives electricity and the terms of service that are available under Standard Supply Service.

Upon receiving an inquiry from a Consumer connected to its distribution system, Toronto Hydro will either respond to the inquiry if it deals with its own distribution services or provide the Consumer with contact information for the entity responsible for the item of inquiry, in accordance with chapter 7 of the Retail Settlement Code.

An embedded distributor that receives electricity from Toronto Hydro shall provide load forecasts or any other information related to the embedded distributor's system load to Toronto Hydro, as determined and required by Toronto Hydro. A distributor shall not require any information from another distributor unless it is required for the safe and reliable operation of either distributor's distribution system or to meet a distributor's licence obligations.

Section 3 – CUSTOMER CLASS SPECIFIC

3 CUSTOMER CLASS SPECIFIC

The Customer Class Specific section shall contain references to services and requirements, which are specific to individual Customer classes. This section should cover such items as:

- ***Demarcation Point***
- ***Metering.***
- ***Service Entrance Requirements.***
- ***Delineation of Ownership and Operational Points of Demarcation.***
- ***Special Contracts.***
- ***Other conditions specific to Customer class.***

The following are examples of Customer specific subsections. It is recognized that Customer Classifications are unique to each Distributor. The Distributor is not limited by these examples to the range and scope of their Customer Classifications. Each Distributor therefore should review their current Classifications and ensure that all of their existing Customer Classifications are adequately covered by the Distributor' s Conditions of Service document.

3.1 Residential

Include all items that apply specifically to Residential Customers not covered under the General section.

Refer to Tables 1.1, 1.2 and 1.3 and Table 2 under Section 5 of this Conditions for Point of Demarcation, Standard Allowance and Connection Fees for Residential Services.

3.1.1 Overhead Services

3.1.1.1 Minimum Requirements

In addition to the requirements of the Ontario Electrical Safety Code (latest edition), the following conditions shall apply:

(i) A clevis type insulator is to be supplied and installed by the Customer.

(ii) This point of attachment device must be located:

(a) Not less than 4.5 metres (15 feet) nor greater than 5.5 metres (18 feet) above grade (to facilitate proper ladder handling techniques). Building must have a minimum offset from property line of 1.2 metres (4 feet).

(b) Between 150 millimetres and 300 millimetres (6-12 inches) below the service head.

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(c) Within 914 millimetres (3 feet) of the face of the building.

(iii) Clearance must be provided between utility conductors and finished grade of at least 6 metres (19 feet) over traveled portions of the road allowance and 4.5 metres (15 feet) over all other areas.

A minimum horizontal clearance of 1.0 metres (39 inches) must be provided from utility conductors and any second storey windows.

(iv) A large, 4 jaw meter socket of an approved manufacturer shall be provided. Certain areas will require a 5-jaw socket as determined by Toronto Hydro. The Customer should contact Toronto Hydro to confirm details.

(v) Clear unobstructed access must be maintained to and in front of the meter location.

(vi) Service locations requiring access to adjacent properties (mutual drives, narrow side set-backs, etc.) will require the completion of an easement or written consent from the property owner(s) involved.

Proposed new or service changes in areas with mutual access (such as driveways, walkways) require:

- at least 50% ownership of the walkway or driveway by the property owner requesting the service when the width of the mutual property is less than 2m. (Right of way access is not considered ownership);
- a minimum of 1m width (for meter only installation) and a minimum 1.5m width (for overhead connection access);
- absence of fences or other property separation;
- unobstructed access to service; and
- customer responsibility for disclosure of all property encumbrances.

Toronto Hydro assumes no liability for any property or meter location disputes between owner(s).

(vii) The approved meter base shall be mounted directly below the service mast such that the midpoint of the meter is 1.73 m (± 100 mm) above finished grade within 914 mm of the face of the building (in front of any existing or proposed fence), unless otherwise approved by Toronto Hydro.

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3.1.1.2 Services Over Swimming Pools

Although the Ontario Electrical Safety Code allows electrical conductors to be located at adequate height, Toronto Hydro will **not** allow electrical conductors to be located above swimming pools.

Where a new swimming pool is to be installed it will be necessary to relocate, at the property owner's expense, any electrical conductors located directly over the proposed pool location.

Where overhead service conductors are in place over an existing swimming pool, Toronto Hydro will provide up to 30 metres of overhead service conductors, at no charge, to allow rerouting of the service. The property owner will pay any other costs.

3.1.2 Underground Services for Individual Residences

Customers requesting an underground service in an overhead area will be required to pay 100% connection costs for the underground service less the Standard Allowance for an overhead service.
The owner shall pay for any necessary road crossings.

The trench route must be approved by Toronto Hydro and is to follow the route indicated on the underground drawing supplied by Toronto Hydro. Any deviation from this route must be approved by Toronto Hydro. The Customer will be responsible for Toronto Hydro's costs associated with re-design and inspection services due to changes or deviations initiated by the Customer or its agents.

The owner will assure the provision for the service entrance and meter meets Toronto Hydro approval.

Where there are other services to be installed (e.g. gas, telephone, and cable) these shall be coordinated to avoid conflict with Toronto Hydro's underground cables. Toronto Hydro's installation will not normally commence until all other servicing and grading have been completed.

It is the responsibility of the owner or his/her contractor to obtain clearances from all of the utility companies (including Toronto Hydro) before digging.

It is the responsibility of the owner to contact Toronto Hydro to inspect each trench prior to the installation of Toronto Hydro's service cables.

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The owner shall provide unimpeded access for Toronto Hydro to install the service.

The owner shall ensure that any intended tree planting has appropriate clearance from underground electrical plant.

3.2 General Service

Include all items that apply specifically to general service Customers not covered under the other sections, and broken down (by load demand).

a) The Customer shall supply the following to Toronto Hydro well in advance of installation commencement:

- Required in-service date
- Proposed Service Entrance equipment's Rated Capacity (Amperes) and Voltage rating and metering requirements
- Propose Total Load details in kVA and/or kW (Winter and Summer)
- Locations of other services, gas, telephone, water and cable TV.
- Details respecting heating equipment, air-conditioners, motor starting current limitation and any appliances which demand a high consumption of electricity
- Survey plan and site plan indicating the proposed location of the service entrance equipment with respect to public rights-of-way and lot lines.
- For General Service (50 – 999kW and 1000kW and above) Class Customers, electrical, architectural and/or mechanical drawings as required by Toronto Hydro.

b) The Customer shall construct and install all civil infrastructure (including but not limited to poles, UG conduits, cable chambers, cable pull rooms, transformer room/vault/pad) on private property, that is deemed required by Toronto Hydro as part of its connection assets. All such civil infrastructures are to be in accordance with Toronto Hydro's current standards, practices, specifications and this Conditions and are subject to Toronto Hydro's inspection and acceptance.

Should the Customer construct and install the civil infrastructure related to connection assets, Toronto Hydro shall not include the associated civil component in its calculation of Basic and Variable Connection Fees.

c) Alternatively, the Customer may have Toronto Hydro construct and install the civil infrastructure that forms part of Toronto Hydro's connection assets on private property and the Customer will therefore be responsible for all costs via Basic Connection and Variable connection Fees (as applicable).

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d) Toronto Hydro is responsible for the maintenance and repairs of its connection assets **but not** the transformer room(s) or any other civil structure that is part of the Customer's building.

e) When effecting changes the Customer shall maintain sufficient clearances between electrical equipment and buildings and other permanent structures to meet the requirements of the Ontario Electrical Safety Code and the Occupational Health & Safety Act and Regulations.

f) It is the responsibility of the owner or his/her contractor to obtain clearances from all of the utility companies (including Toronto Hydro) before digging.

g) Provided the existing civil infrastructure has been maintained in satisfactory conditions by the Customer, Toronto Hydro will undertake the necessary programs to enhance its distribution plant at its expense, as part of its planned activities during normal business hours, Monday to Friday.

When a Customer requests that such planned activities be done outside Toronto Hydro's normal business hours, then the Customer shall pay the incremental costs incurred by Toronto Hydro as a result thereof. A Customer contribution may not be required for work performed outside of normal business hours if the work is part of planned maintenance programs on Toronto Hydro distribution system.

In the event that services or facilities to a Customer need to be restored as a result of these construction or maintenance activities by Toronto Hydro, they will be restored to an equivalent condition.

In addition, Toronto Hydro will carry out the necessary construction and electrical work to maintain existing supplies by providing standard overhead or underground supply services to Customers affected by Toronto Hydro's construction activities. If a Customer requests special construction beyond the normal Toronto Hydro standard installation in accordance with the program, the Customer shall pay the additional cost associated therewith, including engineering and administration fees.

h) Toronto Hydro shall install, maintain, and replace, at its own cost, all those civil infrastructures that are part of its main distribution system (i.e. not including connection assets) that may be located on private property and which serve Customers that are located outside of that private property. These Toronto Hydro civil infrastructures will require an easement.

i) The Customer shall install, maintain, and replace, at its own cost, all those civil infrastructures located on private property that are required to house the

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connection assets (i.e. the electrical equipment owned by Toronto Hydro) that serve Customers that are located on that private property.

Where changes to Customer's civil infrastructure are part of a Toronto Hydro initiated enhancement project, Toronto Hydro may absorb the costs of modifications to the Customer's civil infrastructure, provided the existing civil infrastructure has been maintained in satisfactory condition by the Customer.

j) The Customer shall maintain in proper working conditions all Customer-owned service disconnecting devices (such as main switch and secondary breakers) that Toronto Hydro may need to operate for safety of its operations. Toronto Hydro shall not be liable if a switch / breaker were become inoperative or get damaged during its operation.

Refer to Tables 1.1, 1.2 and 1.3 and Table 2 of Section 5 of this Conditions for Point of Demarcation, Standard Allowance and Connection Fees for General Service.

3.2.1 Electrical Requirements (as applicable)

For low voltage supply, the Customer's service entrance equipment shall be suitable to accept conductors installed by Toronto Hydro. The Customer's cables shall be brought to a point determined by Toronto Hydro for connection to Toronto Hydro's supply.

The owner is required to supply and maintain an electrical room of sufficient size to accommodate the service entrance and meter requirements of the tenants and provide clear working space in accordance with the Ontario Electrical Safety Code.

In order to allow for an increase in load, the owner shall provide spare wall space so that at least 30% of the Customers supplied through meter sockets can accommodate meter cabinets at a later date.

Access doors, panels, slabs and vents shall be kept free from obstructing objects. The Customer will provide unimpeded and safe access to Toronto Hydro at all times for the purpose of installing, removing, maintaining, operating or changing transformers and associated equipment.

The electrical room must be located to provide safe access from the outside or main hallway, and not from an adjoining room, so that it is readily accessible to Toronto Hydro's employees and agents at all hours to permit meter reading and to maintain electric supply. This room must be locked. The owner shall install a pad bolt with mortise strike (Ackland Hardware, Cat. No. 199-10 or equivalent). Toronto Hydro shall provide a secure arrangement so that Toronto Hydro's padlock can be installed as well as the Customer's lock.

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The electrical room shall not be used for storage or contain equipment foreign to the electrical installation within the area designated as safe working space. All stairways leading to electrical rooms above or below grade shall have a handrail on at least one side as per the Ontario Building Code and shall be located indoors.

Outside doors providing access to electrical rooms must have at least 150-mm clearance between final grade and the bottom of the door. Electrical rooms 'on' or 'below' grade must have a drain including a "P" trap complete with a non-mechanical priming device and a backwater valve connected to the sanitary sewer. The electrical room floor must slope 6-mm/300 mm or 2% towards the drain.

The electrical room shall have a minimum ceiling height of 2.2 m clear, be provided with adequate lighting at the working level, in accordance with Illuminating Engineering Society (I.E.S.) standards, and a 120 V convenience outlet. The lights and convenience outlet noted above and any required vault circuit shall be supplied from a panel located and clearly identified in the electrical room.

3.2.2 Underground Service Requirements

The Customer shall construct or install all civil infrastructure (including but not limited to poles, UG conduits, cable chambers, cable pull rooms, transformer room/vault/pad) on private property, that is deemed required by Toronto Hydro as part of its Connection Assets. All civil infrastructures are to be in accordance with Toronto Hydro’s current standards, practices, specifications and this Conditions and are subject to Toronto Hydro’s inspection/acceptance.

The Customer is responsible to maintain all its structural and mechanical facilities on private property in a safe condition satisfactory to Toronto Hydro.

The trench route must be approved by Toronto Hydro. Any deviation from this route must also be approved by Toronto Hydro. The Customer will be responsible for Toronto Hydro’s costs associated with re-design and inspection services due to changes or deviations initiated by the Customer or its agents or any other body having jurisdiction.

It is the responsibility of the owner or his/her contractor to obtain clearances from all of the utility companies (including Toronto Hydro) before digging.

It is the responsibility of the owner to contact Toronto Hydro to inspect each trench prior to the installation of Toronto Hydro's cables.

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3.2.3 Temporary Services (other than Residential)

A temporary service is a normally metered service provided for construction purposes or special events. Temporary services can be supplied overhead or underground. The Customer will be responsible for all associated costs for the installation and removal of equipment required for a temporary service to Toronto Hydro's point of supply. Temporary services may be provided for a period of no more than 12 months. Temporary services must be renewed thereafter if an extension is required and the equipment for such temporary service must be reinspected at the end of the 12-month period.

Subject to the requirements of Toronto Hydro, supply will be connected after receipt of a 'Connection Authorization' from the Electrical Safety Authority, a signed contract and a deposit from the Customer.

Where meter bases are required, they must be approved by Toronto Hydro and shall be securely mounted on minimum 152 mm diameter poles (or alternative if approved by Toronto Hydro) so that the midpoint of the meter is 1.73 m (± 100 mm) from finished grade.

In the case of temporary overhead services, the Customer shall leave 760 mm of cable at the masthead for connection purposes.

In the case of temporary underground services, the Customer's cable shall extend to Toronto Hydro’s point of supply.

3.3 General Service (Above 50 kW)

Include all items that apply specifically to General Service Customers (above 50 kW) not covered under the General section. Describe the criteria to determine how a Customer is classified as being above 50 kW.

All non-residential Customers with an average peak demand between 50 kW and 999 kW over the past twelve months are to be classified as General Services above 50 kW.

3.3.1 New Residential Subdivisions or Multi-Unit Developments

Customers of new Residential Subdivisions involving the construction of new city streets and roadways, or of Multi-unit Developments that are supplied from primary distribution systems built along private streets, are treated as Non-Residential Class Customers and will be subject to capital contribution for “expansion” work, in addition to any applicable Connection Fees. Should the Economic Evaluation identify a shortfall for the Expansion, the Developer has a choice of either completing the portion of plant not yet connected to Toronto Hydro’s system or have Toronto Hydro complete this work in accordance with

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Section 3.3 of the DSC Code, titled "Alternative Bids". The Customer will not be allowed to complete construction work on Toronto Hydro's existing distribution system.

All other Residential Subdivisions or Multi-unit complexes will follow the general terms and conditions for Connection Fees and capital contribution for the appropriate General Class Customers.

In all cases, all of the electrical service must be constructed to Toronto Hydro's standards and in compliance with the Ontario Electrical Safety Code, applicable laws, regulations and codes.

All design work including service locations and trench routes must be approved by Toronto Hydro.

3.3.2 Electrical Requirements

Where the size of the Customer's electrical service warrants, as determined by Toronto Hydro, the Customer will be required to provide facilities on its property and an easement as required (i.e. on the premises to be served), acceptable to Toronto Hydro, to house the necessary transformer(s) and/or switching equipment. Toronto Hydro will provide planning details upon application for service.

Toronto Hydro will supply, install and maintain the electrical transformation equipment within the transformer vault or pad supplied by the Customer, at its expense, on the property. Toronto Hydro has the right to have this equipment connected to its distribution system.

The owner is required to supply and maintain an electrical room of sufficient size to accommodate the service entrance and meter requirements of the tenants and provide clear working space in accordance with the Ontario Electrical Safety Code.

In order to allow for an increase in load, the owner shall provide spare wall space so that at least 30% of the Customers supplied through meter sockets can accommodate meter cabinets at a later date.

The electrical room must be separate from, but adjacent to, the transformer vault. It must be located to provide safe access from the outside or main hallway, and not from an adjoining room, so that it is readily accessible to Toronto Hydro's employees and agents at all hours to permit meter reading and to maintain electric supply. This room must be locked. The owner shall install a pad bolt with mortise strike (Ackland Hardware, Cat. No. 199-10 or

equivalent). Toronto Hydro shall provide a secure arrangement so that Toronto Hydro's padlock can be installed as well as the Customer's lock.

The electrical room shall not be used for storage or contain equipment not related to the electrical installation within the area designated by Toronto Hydro as safe working space. All stairways leading to electrical rooms above or below grade shall have a handrail on at least one side as per the Ontario Building Code, and shall be located indoors.

Outside doors providing access to electrical rooms must have at least 150-mm clearance between final grade and the bottom of the door. Electrical rooms 'on' or 'below' grade must have a drain including a "P" trap complete with a non-mechanical priming device and a backwater valve connected to the sanitary sewer. The electrical room floor must slope 6-mm/300 mm or 2% towards the drain.

The electrical room shall have a minimum ceiling height of 2.2 m clear, be provided with adequate lighting at the working level, in accordance with Illuminating Engineering Society (I.E.S.) standards, and a 120 V convenience outlet. The lights and convenience outlet noted above and any required vault circuit shall be supplied from a panel located and clearly identified in the electrical room.

The owner shall identify each tenant's metered service by address and/or unit number in a permanent and legible manner. The identification shall apply to all main switches, breakers and to all meter cabinets or meter mounting devices that are not immediately adjacent to the switch or breaker. The electrical room shall be visibly identified from the outside.

3.3.3 Technical Information

Where project drawings are required for Toronto Hydro's approval, for items under Toronto Hydro's jurisdiction, the Customer or its authorized representative must ensure that proposal drawings are fully in compliance with Toronto Hydro's standards. Approval of project drawings by Toronto Hydro shall not relieve the Customer of its responsibility in respect of full compliance with Toronto Hydro's standards and all applicable laws, regulations and codes. In all cases, one copy of all relevant drawings must be submitted to Toronto Hydro. Where the Customer requires an approved copy to be returned, two copies of all plans must be submitted.

Prior to the preparation of a design for a service, the Customer will provide the following information to Toronto Hydro as well as the approximate date that the Customer requires the electrical service and the due date that Toronto

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Hydro's civil construction drawings are required in order to co-ordinate with site construction.

3.3.3.1 Site & Grading Plans

Indicate the lot number, plan numbers and, when available, the street number. The site plan shall show the location of the Building on the property relative to the property lines, any driveways and parking areas and the distance to the nearest intersection. All elevations shall be shown for all structures and proposed installations.

3.3.3.2 Mechanical Servicing Plan

Show the location on the property of all services proposed and/or existing such as water, gas, storm and sanitary sewers, telephone, et cetera.

3.3.3.3 Floor Plan

Show the service location, other services location, driveway, parking and indicate the total gross floor area of the building.

3.3.3.4 Duct Bank Location

Show the preferred routing of the underground duct bank on the property. This is subject to approval by Toronto Hydro.

3.3.3.5 Transformer Location

Indicate the preferred location on the property for the high voltage transformation. This is subject to approval by Toronto Hydro. Transformation will be vault, pad, submersible type or polemounted depending on the project load requirements.

3.3.3.6 Electrical Meter Room

Indicate preferred location in the building of the meter room and the main switchboard.

3.3.3.7 Single Line Diagram

Show the main service entrance switch capacity, the required supply voltage, and the number and capacity of all sub-services showing provision for metering facilities, as well as the connected load breakdown for lighting, heating, ventilation, air conditioning et cetera. Also, indicate the estimated initial kilowatt demand and ultimate maximum demands. Provide protection equipment information where coordination is required between

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Toronto Hydro and Customer owned equipment. Fusing will be determined later by Toronto Hydro to co-ordinate with the transformer size selected.

3.3.3.8 Switchgear

Submit three copies of any service entrance switchgear to be installed for Toronto Hydro's approval, including interlocking arrangement if required.

3.3.3.9 Substation Information

Where a Customer owned substation is to be provided, the owner will be required to provide the following in addition to the site information outlined above.

- All details of the transformer, including kVA capacity, short circuit rating (in accordance with 3.3.4.1), primary and secondary voltages, impedance and cooling details.
- A site plan of the transformer station showing the equipment layout, proposed primary connections, grounding and fence details, where applicable.
- A coordination study for protection review.

3.3.4 Technical Considerations

3.3.4.1 Short Circuit Ratings

16000/27600 V Supply: The Customer's protective equipment shall have a three phase, short circuit rating of 800 MVA symmetrical. The asymmetrical current is 27,000 A (1.6 factor used).

8000/13800 V Supply: The Customer's protective equipment shall have a three phase, short circuit rating of 500 MVA symmetrical. The asymmetrical current is 34,000 A (1.6 factor used.)

2400/4160 V Supply: The Customer's protective equipment shall have a three phase, short circuit rating of 250 MVA symmetrical or 56,000 A asymmetrical (1.6 factor used).

600/347 V Supply: The Customer's protective equipment shall have a minimum short circuit rating of 50,000 A.

208/120 V Supply: Available short circuit current may be obtained upon request to Toronto Hydro.

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3.3.4.2 Primary Fusing

All equipment connected to the Toronto Hydro's distribution system shall satisfy the short circuit ratings specified in clause 3.3.4.1.
The Customer and/or the Customer's consultant shall specify the fuse link rating and demonstrate coordination with Toronto Hydro's upstream protection including station breakers and/or distribution fuses. The Customer shall submit, at its expense, a coordination study to Toronto Hydro for verification to ensure coordination with upstream protection including station breakers and/or distribution fuses. The Customer shall maintain an adequate supply of spare fuses to ensure availability for replacement in the event of a fuse blowing.

3.3.4.3 Ground Fault Interrupting

Where ground fault protection is required to comply with the Ontario Electrical Safety Code, the method and equipment used shall be compatible with Toronto Hydro's practice of grounding transformer neutral terminals in vaults. Zero sequence sensing will normally apply. Where ground strap sensing is used, the ground sensing devices shall be set to operate at 600 A if transformer and switchboard buses are not bonded and 400 A if buses are bonded. Ground fault protection proposals for dual secondary supply arrangements shall be submitted to Toronto Hydro for approval, before construction of the switchboard.

3.3.4.4 Lightning Arresters

Customer installations that are directly supplied from Toronto Hydro's primary underground system are not protected with lightning arresters. If the Customer wishes to install lightning arresters they shall be located on the load side of the first protective devices. For Customer installations that are supplied from Toronto Hydro's primary overhead system, Toronto Hydro, at its expense, will install lightning arresters at the pole and the Customer, at its expense, may install lightning arresters in the switchgear on the load side of the incoming disconnect device. The mimic diagram shall indicate the presence of such devices in the switchgear.

3.3.4.5 Basic Impulse Level (B.I.L.)

The Customer's apparatus shall have a minimum Basic Impulse Level in accordance with the following:

(a) 2400/4160 supply voltage - 60 kV B.I.L.
(b) 8000/13800 " " - 95 kV B.I.L
(c) 16000/27600 " " - Delta primary150 kV B.I.L.
(d) 16000/27000 " " - Grounded Wye primary 125 kV B.I.L.

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3.3.4.6 Unbalanced Loads

On three-phase service, the unbalance due to single-phase loads shall not exceed 20% of the Customer's balanced phase loading expressed in kilowatts.

3.4 General Service (Above 1000 kW)

Include all items that apply specifically to General Service Customers (above 1000 kW) not covered under the General section. Describe the criteria to determine how a Customer is classified as being above 1000 kW.

All non-residential Customers with an average monthly demand of 1000 kW or higher, averaged over twelve consecutive months, as determined by Toronto Hydro, are to be classified as Customers over 1000 kW.

3.4.1 Electrical Requirements

Where a primary service is provided to a Customer-owned substation, the Customer shall install and maintain such equipment in accordance with all applicable laws, codes, regulations, and Toronto Hydro's Customer Owned Substation requirements for high voltage installations. Toronto Hydro will provide planning details upon application for service.

Customer owned substations are a collection of transformers and switchgear located in a suitable room or enclosure owned and maintained by the Customer, and supplied at primary voltage: i.e. the Supply Voltage is greater than 750 volts.

All high voltage distribution services are three-phase, four-wire. The Customer is required to bring out a neutral conductor for connection to the system neutral. If not required for Customer's use, this neutral shall be terminated to the Customer's station ground system.
Toronto Hydro will provide Customer interface details and requirements for high voltage supplies.

Customer must provide transformers having voltage taps in their primary windings and configurations as shown in Table 4 in section 5 of this Conditions for all new, upgraded and refurbished installations. Transformers other than listed in Table 4 may be considered in like-for-like repair but shall not be connected without the specific written approval of Toronto Hydro.

Customer owned substations must be inspected by both the Electrical Safety Authority and Toronto Hydro. The owner will provide a pre-service inspection report to Toronto Hydro. A contractor acceptable to Toronto Hydro will prepare the certified report to Toronto Hydro.

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The Customer and Toronto Hydro shall inspect their own respective substations in accordance with the Distribution System Code. The minimum inspection cycles for Customer specific substations are one year for open substations and three years for enclosed substations. To facilitate and encourage the maintenance of this equipment, including, without limitation, the installation, maintenance, and testing of vault fire alarm detectors, Toronto Hydro will provide one power interruption annually, at no charge. This no-charge service would be scheduled during Toronto Hydro's normal business hours, Monday to Friday, and appointment times are not necessarily guaranteed. Toronto Hydro will charge Customers for power interruptions arranged at times other than as outlined above.

3.4.2 Technical Information and Considerations

The same information and considerations apply as for other General Service Customers. Refer to Subsection 3.3.3 and 3.3.4 for applicable requirements.

3.5 Embedded Generation Facilities

This section should include all terms and conditions applicable to the connection of embedded generation facility to the distributor (e.g., application process, engineering standards and operating agreements).

The Generator Classifications set forth in the Distribution System Code are outlined in the table below:

Generator Classification	Rating
Micro	≤ 10 kW, for customer's own use
Small	(a) ≤ 500 kW connected on distribution system voltage < 15 kV (b) ≤ 1 MW connected on distribution system voltage ≥ 15 kV
Mid-Sized	(a) > 500 kW but ≤ 10 MW connected on distribution system voltage < 15 kV (b) > 1 MW but ≤ 10 MW connected on distribution system voltage ≥15 kV
Large	> 10 MW

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3.5.1 Connection Agreement

Section 3.5 does not apply to the connection or operation of an emergency backup generation facility or an embedded generation facility that is used exclusively for load displacement purposes. Refer to Subsection 2.3.6 for applicable requirements.

Toronto Hydro shall enter into a Connection Agreement with all existing Customers who have an embedded generation facility connected to the Toronto Hydro distribution system and also with all new Customers prior to connecting a new generation facility. For micro-embedded generation facility, the Connection Agreement shall be in the form set out in Schedule B1 in Section 6 and for small, mid-sized, and large embedded generation facilities, the Connection Agreement shall be in the form set out in Schedule B2 in Section 6. Where Toronto Hydro does not have a Connection Agreement with an existing Customer that has a generation facility connected to the Toronto Hydro distribution system, the Customer shall be deemed to have accepted and agreed to be bound by all of the Connection Agreement Terms and Conditions attached to this Conditions as Schedule B3 in Section 6, and the terms of any operating schedule delivered to it from time to time by Toronto Hydro.

3.5.2 Connection Process

Toronto Hydro has created an "Embedded Generation Connection Overview" which contains the following information:

(a) the process for having a generation facility connected to the Toronto Hydro distribution system, including any form necessary for the application;

(b) information regarding any approvals from the ESA, the IESO, OEB, OPA, or a transmitter that are required before Toronto Hydro will connect a generation facility to its distribution system;

(c) the technical requirements for being connected to the Toronto Hydro distribution system including the metering requirements; and

(d) the standard contractual terms and conditions for being connected to the Toronto Hydro distribution system.

Subject to all applicable laws, Toronto Hydro will make all reasonable efforts in accordance with the provisions of Section 3.5 to promptly connect to its distribution system a generation facility, which is the subject of an application for connection.

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3.5.3 Connection of Micro-Generation Facilities

A person who wishes to connect a micro-embedded generation facility to the Toronto Hydro distribution system shall submit an application to Toronto

Hydro providing the following information:

(a) the name-plate rated capacity of each unit of the proposed generation facility and the total name-plate rated capacity of the proposed generation facility at the connection point;
(b) the fuel type of the proposed generation facility;
(c) the type of technology to be used; and
(d) the location of the proposed generation facility including address and account number where available.

Where the proposed micro-embedded generation facility is located at an existing Customer connection, Toronto Hydro shall, within 15 days of receiving the application, make an offer to connect or provide reasons for refusing to connect the proposed generation facility. Toronto Hydro shall give the applicant at least 30 days to accept the offer to connect and shall not revoke the offer to connect until this time period has expired. Toronto Hydro will not charge the Customer for the preparation of the Offer to Connect.

Toronto Hydro shall make any necessary metering changes and connect the applicant's micro-embedded generation facility to its distribution system within 5 days of the applicant completing the following:

(a) Provide Toronto Hydro with a copy of the authorization to connect from the ESA;
(b) enter into a Connection Agreement with Toronto Hydro in the form set out in Section 6, Reference #2 Schedule B1; and
(c) pay Toronto Hydro for the costs of any necessary metering changes.

3.5.4 Connection of Other Generation Facilities

Subsection 3.5.4 applies to the connection to the Toronto Hydro distribution system of an embedded generation facility, which is not a micro-embedded generation facility.

After a person who is considering applying for the connection of a generation facility to the Toronto Hydro distribution system has requested a preliminary meeting with Toronto Hydro and has provided the required initial set of information, then Toronto Hydro shall provide a time when its relevant employees are available to meet with the person within 15 days of the person requesting the meeting. For the purposes of this section, the following is the required "initial set of information":

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(a) the nameplate rated capacity of each unit of the proposed generation facility and the total nameplate rated capacity of the generation facility at the connection point;

(b) the fuel type of the proposed generation facility;

(c) the type of technology to be used; and

(d) the location of the proposed generation facility including address and account number with the distributor where available.

At the preliminary meeting, Toronto Hydro shall discuss the basic feasibility of the proposed connection including discussing the location of its existing distribution facilities in relation to the proposed generation facility and providing an estimate of the time and costs necessary to complete the connection. Toronto Hydro will not charge for its preparation for and attendance at the preliminary meeting.

A person who wishes to apply for the connection of a generation facility to the Toronto Hydro distribution system shall submit an application, pay their impact assessment costs (applicable to mid-sized and large generation facilities or small generation facilities where requested by Toronto Hydro) and provide the following information:

(a) any of the "initial set of information" which has not yet been provided to Toronto Hydro;

(b) a single line diagram of the proposed connection; and

(c) a preliminary design of the proposed interface protection.

For a **small** embedded generation facility, where Toronto Hydro believes that a system directly connected to its distribution system may be impacted by the proposed small embedded generation facility, Toronto Hydro will advise the Customer of the costs to conduct any required impact assessment.

Toronto Hydro shall provide the Customer with its results of its impact assessment of the proposed generation facility, a detailed cost estimate of the proposed connection, and an offer to connect within:

(a) 60 days of the receipt of the application where no distribution system reinforcement or expansion is required; and
(b) 90 days of the receipt of the application where a distribution system reinforcement or expansion is required.

For a **mid-sized** embedded generation facility, Toronto Hydro shall provide the Customer with its impact assessment of the proposed generation facility within 60 days of the receipt of the application.

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For a **large** embedded generation facility, Toronto Hydro shall provide the Customer with its impact assessment of the proposed generation facility within 90 days of the receipt of the application.

The impact assessment shall set out the impact of the proposed generation facility on the Toronto Hydro distribution system and any of its customers including:

(a) any voltage impacts, impacts on current loading settings and impacts on fault currents;
(b) the connection feasibility;
(c) the need for any line or equipment upgrades;
(d) the need for transmission system protection modifications; and
(e) any metering requirements.

The Customer shall submit any material revisions to the design, planned equipment or plans for the proposed generation facility and connection with Toronto Hydro. Toronto Hydro shall then prepare a new impact assessment within the relevant time period as set out above.

In the case of an application for the connection of a mid-sized or large embedded generation facility, after receiving from Toronto Hydro the impact assessment the applicant shall pay to Toronto Hydro for the cost of preparing a detailed cost estimate of the proposed connection and enter into an agreement with Toronto Hydro on the scope of the project. Toronto Hydro shall then provide the applicant with a detailed cost estimate and an offer to connect by the later of 90 days after the receipt of payment from the applicant and 30 days after the receipt of comments from a transmitter or other distributor that may have been advised under the following clause.

Within 10 days of receiving payment from the applicant for preparing a detailed cost estimate, Toronto Hydro shall advise any transmitter or distributor whose transmission or distribution system is directly connected to the Toronto Hydro distribution system that it is preparing a detailed cost estimate for a proposed large or mid-sized embedded generation facility. Toronto Hydro will use its discretion in advising impacted transmitter or distributor when the detailed cost estimate involves a proposed small embedded generation facility.

After the applicant has entered into a connection cost agreement with Toronto Hydro and has provided the detailed engineering drawings with respect to the proposal, Toronto Hydro shall conduct a design review to determine if the detailed engineering plans are acceptable.

Toronto Hydro has the right to witness the commissioning and testing of the connection of the generation facility to its distribution system. After the applicant has

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(a) informed Toronto Hydro that it has received all necessary approvals;
(b) provided Toronto Hydro with a copy of the Certificate of Inspection from the ESA; and
(c) entered into the appropriate Connection Agreement;

and Toronto Hydro has received the Authorization to Connect from ESA it shall act to connect the generation facility to its distribution system in accordance with this Conditions.

Subject to any delays in commissioning and testing of the generation facility, which may be beyond the control of Toronto Hydro, Toronto Hydro shall connect a proposed small embedded generation facility within:

a) 60 days of the applicant taking the steps set out above, where no distribution system reinforcement or expansion is required; and
(b) 180 days of the applicant taking the steps set out above, where a distribution system reinforcement or expansion is required.

Information on the process for connecting a generation facility to a distribution system is set out in Appendix F.1 of the DSC.

3.5.5 Technical Requirements

The Customer shall ensure that the connection of its generation facility to the distribution system does not materially adversely affect the safety, reliability and efficiency of the Toronto Hydro distribution system. New or significantly modified generation facilities shall meet the technical requirements specified in Appendix F.2 of the DSC. In addition, the Customer shall also comply with the detailed requirements outlined in Section 6, Reference #3 - "Toronto Hydro Parallel Generation Requirements".

The Customer with an embedded generation facility connected to the Toronto Hydro distribution system (other than a micro-embedded generation facility) shall reimburse Toronto Hydro for any damage to the distribution system or increased operating costs that may result from the connection of a generation facility.

A Customer with a generation facility connected to the Toronto Hydro distribution system shall include in the connection agreement and upon request by Toronto Hydro provide satisfactory evidence of a regular, scheduled maintenance plan that ensures that the generator's connection devices, protection systems and control systems are maintained in good working conditions.

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All equipment that is connected, operated, procured or ordered before May 1, 2002 is deemed to be in compliance with the technical requirements of the DSC.

Toronto Hydro may determine that equipment that was deemed to be in compliance with the technical requirements of the DSC as noted in the immediately preceding paragraph is not in **actual** compliance with the technical requirements due to any of the following conditions:

(a) a material deterioration of the reliability of the distribution system resulting from the performance of the generator's equipment; or
(b) a material negative impact on the quality of power of an existing or a new customer resulting from the performance of the generator's equipment; or
(c) a material increase in generator capacity at the site where the equipment deemed compliant is located.

In such a case, Toronto Hydro will provide the Customer with rules and procedures for requiring such equipment to be brought into actual compliance. The Customer shall then bring its equipment into actual compliance with the technical requirements and within a reasonable time period specified by Toronto Hydro.

When a Customer with an embedded generation facility is connected to the Toronto Hydro distribution system, the Customer shall provide an interface protection that is capable of automatically isolating the generation facility from the Toronto Hydro distribution system under the following situations:

(a) internal faults within the generator
(b) external faults in the Toronto Hydro distribution system
(c) certain abnormal system conditions, such as over/under voltage, over/under frequency.

The Customers shall disconnect the embedded generation facility from the Toronto Hydro distribution system when:

(a) a remote trip or transfer trip is included in the interface protection, and
(b) the Customer effects changes in the normal feeder arrangements other than those agreed upon in the operating agreement between Toronto Hydro and the Customer.

3.5.6 Net Metering Program for an Embedded Generation Facility

As a way to encourage conservation, Toronto Hydro has established a Net Metering Policy for eligible customers wishing to participate in the Net Metering program. Eligible customers with specific generation facilities may reduce their net energy costs by exporting surplus generated energy back onto

the utility distribution system for credit against the energy the customer consumes from the distribution system.

Participation in the Net Metering Program is available to all Toronto Hydro customers with a generator that meet all of the following conditions:

1. The electricity is generated primarily for the customer's own use;
2. The electricity generated is conveyed to the customer's own consumption point without reliance on the Toronto Hydro distribution system;
3. The maximum cumulative output capacity of the generator does not exceed 500 kW; and
4. The electricity is solely generated from a renewable energy source (such as wind, drop in water elevation, solar radiation, agricultural bio-mass, or any combination thereof).

In order to participate in the Net Metering program, the customer will be required to meet all the parallel generation requirements for Connecting Micro-Generation Facilities (10 kW or less) or Other Generation Facilities (greater than 10 kW and less than 500 kW), as applicable to the generator size, as found in Section 3.5 - Embedded Generation Facilities

The customer must have a bi-directional revenue meter that records energy flow in both directions.

In accordance with the Net Metering Regulation, Toronto Hydro has established a Net Metering Program regarding the netting of surplus generated energy with energy consumed from the Toronto Hydro supply. This program, as amended from time to time, is posted on the Toronto Hydro website and can be downloaded from
http://www.torontohydro.com/electricsystem/business/net_metering_for_business.html

3.5.7 Ontario Power Authority (OPA) Standard Offer Program for an Embedded Generation Facility

In conjunction with the OPA Standard Offer Program (SOP), Toronto Hydro has established its policy to encourage and promote greater use of renewable energy sources such as wind, solar, photovoltaic (PV), renewable biomass, bio-gas, bio-fuel, landfill gas, or drop in water elevation for generating electricity. Renewable energy electricity generation projects with a capacity of 10 MW or less that meets the program's requirements may be connected to Toronto Hydro distribution system in order to export electricity.

In most circumstances, generating facilities participating in the Standard Offer Program will connect directly to the Toronto Hydro distribution system at a

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voltage of 27.6 kV or less. Output from the generating facility shall be metered as follows:

a. for generators of 10 kW or less and connected to the line side of the load meter, a bi-directional kWh meter must be installed to measure energy consumed and energy exported; and

b. for all other generators, an interval meter must be installed.

The generator will be solely responsible for any costs associated with the connection to the Toronto Hydro distribution system and any required metering installation.

The Toronto Hydro's policy for the OPA Standard Offer Program is posted, as amended from time to time, on the Toronto Hydro website and can be downloaded from
http://www.torontohydro.com/electricsystem/residential/standard_offer_program.html

3.6 Wholesale Market Participant

Criteria for a Customer that is classified as being a Market Participant needs to be established. This section should describe any specific requirements for Customers that also are Market Participants.

Under the "Market Rules for the Ontario Electricity Market", Chapter 2, section 1.2.1, "No persons shall participate in the IESO-administered markets or cause or permit electricity to be conveyed into, through or out of IESO-controlled grid unless that person has been authorized by the IESO to do so".

All Embedded Market Participants, within the service jurisdiction of Toronto Hydro, once approved by the IESO are required to inform Toronto Hydro of their approved status in writing, 30 days prior to their participation in the Ontario Electricity market.

A Wholesale Market Participant shall enter into a Connection Agreement in a form acceptable to Toronto Hydro. Until such time as the Wholesale Market Participant executes such a Connection Agreement with Toronto Hydro, the Wholesale Market Participant shall be deemed to have accepted and agreed to be bound by all of the Connection Agreement Terms and Conditions attached to this Conditions of Service as Schedule C to Section 6, and the terms of any operating schedule delivered to it from time to time by Toronto Hydro.

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3.7 Embedded Distributor

This section should include all terms and conditions applicable to the connection of an Embedded Distributor.

All embedded distributors within the service jurisdiction of Toronto Hydro are required to inform Toronto Hydro of their status in writing 30 days prior to the supply of electricity from Toronto Hydro. The terms and conditions applicable to the connection of an embedded distributor shall be included in the Connection Agreement with Toronto Hydro.

An Embedded Distributor shall enter into a Connection Agreement in a form acceptable to Toronto Hydro. Until such time as the Embedded Distributor executes such a Connection Agreement with Toronto Hydro, the Embedded Distributor shall be deemed to have accepted and agreed to be bound by all of the terms in this Conditions that apply to such Embedded Distributor.

3.8 Unmetered Connections

This section will include all terms and conditions applicable to unmetered connection.

Toronto Hydro, at its sole discretion, may provide for new service connections without a meter being installed. These loads would generally be small in size, non-variable, and supply a single device. Examples of services that are considered for unmetered supply include traffic & railway crossing signals, pedestrian x-walk signals/beacons, bus shelters, telephone booths, CATV amplifiers, TTC switching devices and other miscellaneous small fixed loads. Other loads less than 2 kW may also be considered for unmetered connections.

In all cases, the Customer shall contact Toronto Hydro for service supply requirements. The Customer shall provide manufacturer information and documentation with regard to electrical demand and expected hours of operation of the proposed unmetered load. Toronto Hydro may require, at its sole discretion, that the Customer provide at its sole cost, a load study acceptable to Toronto Hydro in order to determine energy consumption.

The Customer shall notify Toronto Hydro prior to making any changes to existing equipment or adding new equipment that is to be supplied from the Toronto Hydro distribution system.

Where installations involve Toronto Hydro owned poles, the method and location of attachment are subject to the approval of Toronto Hydro. Toronto Hydro may, in its sole discretion, require the Customer to enter into agreement with Toronto Hydro governing such attachments.

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The Customer shall construct, at its expense, the civil infrastructure (including but not limited to poles, UG conduits, handwells, tap boxes, junction boxes, pedestals) on public road allowances or private property that is deemed required by Toronto Hydro to house or support Toronto Hydro's electrical equipment. These civil infrastructures shall be in accordance with Toronto Hydro's current standards, practices, specifications and this Conditions and are subject to inspection and acceptance by Toronto Hydro.

Toronto Hydro will provide, at the Customer's expense, for all breakouts of the Toronto Hydro civil infrastructure (i.e. cable chambers, vaults), which may be required to make the service connection. The Customer's service connection equipment shall be suitable to accept conductors installed by Toronto Hydro. The Customer shall bring its cables to a point determined by Toronto Hydro. Toronto Hydro shall make all new connections and final disconnections to and from Toronto Hydro's distribution system. The Customer shall pay the applicable Connection Fees as outlined in Sections 3.8.1 to 3.8.4 and Table #3. Where "variable connection fees" apply, Toronto Hydro shall provide an estimate of the proposed work to the unmetered Customer. In turn, the unmetered Customer shall provide a response to proceed or not with the proposed work to Toronto Hydro within two weeks.

The Customer shall maintain its civil infrastructure in a safe condition satisfactory to Toronto Hydro. Toronto Hydro will undertake the necessary programs to maintain and enhance its distribution plant. However, if during the course of Toronto Hydro's work, relocation of Customer equipment is necessary, the Customer shall reimburse Toronto Hydro for all costs incurred for in relocating Customer's infrastructure. More specifically, Toronto Hydro will provide standard overhead or underground supply services to unmetered Customers affected by Toronto Hydro's construction activities at its own cost. However, where the unmetered Customer requests special construction beyond the normal Toronto Hydro standard installation in accordance with its program, the unmetered Customer shall pay the additional cost, including engineering and administration fees.

Request for payment shall be subject to Toronto Hydro having provided the unmetered Customer with adequate advance notice, prior to effecting the relocation. The unmetered Customer shall respond within two weeks of its intended plan to modify, upgrade, or remove its plant. Customer's unmetered loads include, but are not limited to the following:

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3.8.1 Street Lighting

All services supplied to street lighting equipment owned by or operated for a municipality or the Province of Ontario shall be classified as Street Lighting Service. For rate structure details refer to Toronto Hydro's Schedule of Rates.

In addition to complying with this Conditions, all Street Lighting plant, facilities, or equipment owned by the Customer must comply with all Electrical Safety Authority (ESA) requirements.

The method and location of underground supply to Street Lighting plant from the Toronto Hydro distribution system will be established for each application through consultation with Toronto Hydro.

Charges related to the Connections of Street Lighting will be recovered via a Basic Connection Fee for a Standard Allowance/Basic Connection and a Variable Connection Fee (if applicable) consistent with the Ownership Demarcation Point defined in Table 3 in Section 5 of this Conditions for various Street Lighting Distribution systems.

3.8.2 Traffic & Railway Crossing Signals and Pedestrian X-Walk Signals/Beacons

Traffic & Railway Crossing Signals and Pedestrian X-Walk Signals/Beacons shall have a rate structure equal to General Service (< 50 kW) Class Customers. Each Traffic & Railway Crossing Signal and Pedestrian X-Walk/Beacon location is reviewed individually and is connected to Toronto Hydro's low voltage distribution system. Electrical Safety Authority (ESA) "Authorization to Connect" is required prior to connecting the service.

The nominal service voltage will be 120/240 Volts, single phase. The method and location of supply will be established for each application through consultation with Toronto Hydro. Supply connections to the municipal or the Province of Ontario's street lighting system will not be permitted.

The Ownership Demarcation Point for electrical equipment owned by Toronto Hydro is as follows:

- For Overhead - the top of the Customer's service standpipe/mast.
- For Underground – the line side of the connector/splice or fuse located in a handwell, tap box, junction box, adjacent to the Toronto Hydro's distribution system supplying the underground secondary service.

The Standard Allowance is the connections at Toronto Hydro's feed pole/lines and final connections at the top of the Customer's service mast (OH) or at Customer's protective device located in Customer's handwell, tap box, junction

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box, pedestal (UG) as determined by Toronto Hydro, and is recovered via a Basic Connection Fee of $365.00 plus GST (OH) and $580.00 plus GST (UG) per location/installation.

Connection assets above and beyond the Standard allowance (e.g. one span of OH service lines or UG conduit and associated service cables) will be recovered through a Variable Connection Fee, based on actual costs.

Re-design and inspection services are at the expense of the Customer. The Customer is responsible for maintaining and repairing its equipment and/or facilities.

3.8.3 Bus Shelters, Telephone booths, CATV Amplifiers, TTC Switching Devices, and Miscellaneous Small Fixed Loads

The above service types shall have a rate structure as General Service (< 50 kW) Class Customers and have the same terms and conditions as outlined in Section 3.8.2 above titled "Traffic & Railway Crossing Signals and Pedestrian X-Walk Signals/Beacons".

3.8.4 Other Loads (<2 kW) - Decorative Lighting and Tree Lighting Services

This section applies to the distribution and supply of electrical energy for decorative lighting. These installations are typically owned and maintained by a local Business Improvement Association (BIA) as a way to improving streetscape or for specific festive occasions. In addition to complying with this Conditions, all such installations must comply with the Ontario Electric Safety Code and are subject to the approval of ESA.

This section does not apply to decorative lighting that is owned by, or operated for, a municipality or the Province of Ontario.

Decorative Lighting and Tree Lighting connected to Toronto Hydro's distribution system shall have a rate structure as General Service (<50 kW) Class Customers and have the same terms and conditions as outlined in Section 3.8.2 titled "Traffic signals and Pedestrian X-Walk Signals/Beacons".

Section 4 – GLOSSARY OF TERMS

4 SECTION 4 GLOSSARY OF TERMS

The Conditions of Service document may contain a variety of terms that should be defined in the context of this document. Where possible, glossary terms should reflect definitions in existing documents that apply to the distributor, such as the DSC Code, the Distributor's licence and Standard Supply Service Code. The text of the Conditions of Service document should be used to expand on these definitions as applicable to the Distributor.

Sources for definitions:

A Electricity Act, 1998, Schedule A, Section 2, Definitions
MR Market Rules for the Ontario Electricity Market, Chapter 11, Definitions
TDL Transitional Distribution License, Part I, Definitions
TTL Transitional Transmission License, Part I, Definitions
DSC Distribution System Code Definitions
RSC Retail Settlement Code Definitions

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

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

"ancillary services" means services necessary to maintain the reliability of the IESO-controlled grid; including frequency control, voltage control, reactive power and operating reserve services; (MR, TDL, DSC)

"apartment building" means a structure containing four or more dwelling units having access from an interior corridor system or common entrance;

"apparent power" means the total power measured in kiloVolt Amperes (kVA);

"application for service" means the agreement or contract with Toronto Hydro under which electrical service is requested;

"bandwidth" means a distributor's defined tolerance used to flag data for further scrutiny at the stage in the VEE (validating, estimating and editing) process where a current reading is compared to a reading from an equivalent historical billing period. For example, a 30 percent bandwidth means a current reading that is either 30 percent lower or 30 percent higher than the measurement from an equivalent historical billing

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period will be identified by the VEE process as requiring further scrutiny and verification; (DSC)

"billing demand" means the metered demand or connected load after necessary adjustments have been made for power factor, intermittent rating, transformer losses and minimum billing. A measurement in kiloWatts (kW) of the maximum rate at which electricity is consumed during a billing period;

“Board” or “OEB” means the Ontario Energy Board; (A, TDL, DSC)

“building” means a building, portion of a building, structure or facility;

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

“Conditions of Service” means the document developed by a distributor in accordance with subsection 2.4 of the Code that describes the operating practices and connection rules for the distributor; (DSC)

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

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

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

“Consumer” means a person who uses, for the person’ s own consumption, electricity that the person did not generate; (A, MR, TDL, DSC)

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

"demand" means the average value of power measured over a specified interval of time, usually expressed in kilowatts (kW). Typical demand intervals are 15, 30 and 60 minutes; (DSC)

“demand meter” means a meter that measures a Consumer’s peak usage during a specified period of time; (DSC)

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"developer" means a person or persons owning property for which new or modified electrical services are to be installed;

“disconnection” means a deactivation of connection assets that results in cessation of distribution services to a Consumer; (DSC)

“distribute”, with respect to electricity, means to convey electricity at voltages of 50 kilovolts or less; (A, MR, TDL, DSC)

“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; (DSC)

“distribution loss factor” means a factor or factors by which metered loads must be multiplied such that when summed equal the total measured load at the supply point(s) to the distribution system; (RSC)

“distribution services” means services related to the distribution of electricity and the services the Board has required distributors to carry out; (RSC, DSC)

“distribution system” means a system for distributing electricity, and includes any structures, equipment or other things used for that purpose. A distribution system is comprised of the main system capable of distributing electricity to many Customers and the connection assets used to connect a Customer to the main distribution system; (A, MR, TDL, DSC)

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

“distributor” means a person who owns or operates a distribution system; (A, MR, TDL, DSC)

"duct bank" means two or more ducts that may be encased in concrete used for the purpose of containing and protecting underground electric cables;

“Electricity Act” means the Electricity Act, 1998, S.O. 1998, c.15, Schedule A; (MR, TDL, DSC)

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

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"electric service" means the Customer's conductors and equipment for energy from Toronto Hydro;

"embedded distributor" means a distributor who is not a wholesale market participant and that is provided electricity by a host distributor; (RSC, DSC)

"embedded generation facility" means a generation facility that is not directly connected to the IESO-controlled grid but instead is connected to a distribution system; (DSC)

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

"embedded wholesale Consumer" means a Consumer who is a wholesale market participant whose facility is not directly connected to the IESO-controlled grid but is connected to a distribution system; (DSC)

"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; (DSC)

"emergency backup generation facility" means a generation facility that has a transfer switch that isolates it from a distribution system; (DSC)

"energy" means the product of power multiplied by time, usually expressed in kilowatt-hours (kWH);

"Energy Competition Act" means the Energy Competition Act, 1998, S.O. 1998, c. 15; (MR)

"energy diversion" means the electricity consumption unaccounted for but that can be quantified through various measures upon review of the meter mechanism, such as unbilled meter readings, tap off load(s) before revenue meter or meter tampering;

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

"expansion" means an addition to a distribution system in response to a request for additional Customer connections that otherwise could not be made; for example, by increasing the length of the distribution system; (DSC)

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"extreme operating conditions" means extreme operating conditions as defined in the Canadian Standards Association ("CSA") Standard CAN3-C235-87 (latest edition);

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

"general service" means any service supplied to premises other than those designated as Residential and less than 50kW, Large User, or Municipal Street Lighting. This includes multi-unit residential establishments such as apartments buildings supplied through one service (bulk-metered);

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

“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; (A, MR, TDL, DSC)

“generator” means a person who owns or operates a generation facility; (A, MR, TDL, DSC)

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

“good utility practice” means any of the practices, methods and acts engaged in or approved by a significant portion of the electric utility industry in North America during the relevant time period, or any of the practices, methods and acts which, in the exercise of reasonable judgement in light of the facts known at the time the decision was made, could have been expected to accomplish the desired result at a reasonable cost consistent with good practices, reliability, safety and expedition. Good utility practice is not intended to be limited to the optimum practice, method, or act to the exclusion of all others, but rather to be acceptable practices, methods, or acts generally accepted in North America; (MR, DSC)

“host distributor” means the registered wholesale market participant distributor who provides electricity to an embedded distributor; (RSC, DSC)

"house service" means that portion of the electrical service in a multiple occupancy facility which is common to all occupants, (i.e. parking lot lighting, sign service, corridor and walkway lighting, et cetera);

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“IEC” means International Electrotechnical Commission;

“IEEE” means Institute of Electrical and Electronics Engineers;

“IESO” means the Independent Electricity Market Operator established under the Electricity Act; (A, TDL, DSC)

“IESO-controlled grid” means the transmission systems with respect to which, pursuant to agreements, the IESO has authority to direct operation; (A, TDL, DSC)

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

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

"large user" means a Customer with a monthly peak demand of 5000 kW or greater, regardless the demand occurs in the peak or off-peak periods, averaged over 12 months;

"load factor" means the ratio of average demand for a designated time period (usually one month) to the maximum demand occurring in that period;

“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; (DSC)

“load transfer Customer” means a Customer that is provided distribution services through a load transfer; (DSC)

“main distribution system” means a distribution system less the connection assets;

"main service" refers to Toronto Hydro’s incoming cables, bus duct, disconnecting and protective equipment for a Building or from which all other metered sub-services are taken;

“market participant” has the meaning prescribed in the Market Rules;

“Market Rules” means the rules made under section 32 of the Electricity Act; (MR, TDL, DSC)

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

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

“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; (RSC, DSC)

"meter socket" means the mounting device for accommodating a socket type revenue meter;

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

“micro-embedded generation facility” means an embedded load displacement generation facility with a nameplate rated capacity of 10 kW or less; (DSC)

“mid-sized embedded generation facility” means an embedded generation facility with a nameplate rated capacity of less than 10 MW and:
(a) more than 500 kW in the case of a facility connected to a less than 15 kV line; and
(b) more than 1 MW in the case of a facility connected to a 15 kV or greater line; (DSC)

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

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

"multiple dwelling" means a Building which contains more than one self-contained dwelling unit;

"municipal street lighting" means all services supplied to street lighting equipment owned and operated for a municipal corporation;

“non-competitive electricity costs” means costs for services from the IESO that are not deemed by the Board to be competitive electricity services plus costs for distribution services, other than Standard Supply Service (SSS); (RSC)

"normal operating conditions" means the operating conditions comply with the standards set by the Canadian Standards Association ("CSA") Standard CAN3-C235-87 (latest edition);

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

“Ontario Energy Board Act” means the Ontario Energy Board Act, 1998, S.O. 1998, c.15, Schedule B; (MR, DSC)

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

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

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

"person" includes an individual, a corporation, sole proprietorship, partnership, unincorporated organization, unincorporated association, body corporate, and any other legal entity;

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

"plaza" means any Building containing two or more commercial business tenants;

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

"power factor" means the ratio between Real Power and Apparent Power (i.e. kW/kVA);

"primary service" means any service which is supplied with a nominal voltage greater than 750 volts;

"private property" means the property beyond the existing public street allowances;

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

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"Rate Handbook" means the document approved by the Board that outlines the regulatory mechanisms that will be applied in the setting of distributor rates; (RSC, DSC)

"reactive power" means the power component which does not produce work but is necessary to allow some equipment to operate, and is measured in kiloVolt Amperes Reactive (kVAR);

"real power" means the power component required to do real work, which is measured in kiloWatts (kW);

"Regulations" means the regulations made under the *Ontario Energy Board Act* or the *Electricity Act*; (TDL, DSC)

"reinforcement" means an investment that a distributor makes to increase the distribution system capacity to accommodate new load on the distributor's distribution system, consistent with the distributor's planning, design, and construction standard.

"residential service" means a service which is less than 50kW supplied to single-family dwelling units that is for domestic or household purposes, including seasonal occupancy. At Toronto Hydro's discretion, residential rates may be applied to apartment buildings with 6 or less units by simple application of the residential rate or by blocking the residential rate by the number of units;

"retail", with respect to electricity means,

a) to sell or offer to sell electricity to a Consumer
b) to act as agent or broker for a retailer with respect to the sale or offering for sale of electricity, or
c) to act or offer to act as an agent or broker for a Consumer with respect to the sale or offering for sale of electricity; (A, MR, TDL, DSC)

"Retail Settlement Code" means the code approved by the Board and in effect at the relevant time, which, among other things, establishes a distributor's obligations and responsibilities associated with financial settlement among retailers and Consumers and provides for tracking and facilitating Consumers transfers among competitive retailers; (TDL, DSC)

"retailer" means a person who retails electricity; (A, MR, TDL, DSC)

"secondary service" means any service which is supplied with a nominal voltage less than 750 Volts;

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“service agreement” means the agreement that sets out the relationship between a licensed retailer and a distributor, in accordance with the provisions of Chapter 12 of the Retail Settlement Code; (RSC)

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

"service date" means the date that the Customer and Toronto Hydro mutually agree upon to begin the supply of electricity by Toronto Hydro;

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

“Standard Supply Service Code” means the code approved by the Board 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; (TDL)

"sub-service" means a separately metered service that is taken from the main Building service;

"supply voltage" means the voltage measured at the Customer's main service entrance equipment (typically below 750 volts). Operating conditions are defined in the Canadian Standards Association ("CSA") Standard CAN3-C235 (latest edition);

"temporary service" means an electrical service granted temporarily for such purposes as construction, real estate sales, trailers, et cetera;

"terminal pole" refers to the Toronto Hydro’s distribution pole on which the service supply cables are terminated;

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

"transformer room" means an isolated enclosure built to applicable codes to house transformers and associated electrical equipment;

“transmission system” means a system for transmitting electricity, and includes any structures, equipment or other things used for that purpose; (A, MR, TDL, DSC)

“Transmission System Code” means the code, approved by the Board, that is in force at the relevant time, which regulates the financial and information obligations of the Transmitter with respect to its relationship with Customers, as well as establishing the

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standards for connection of Customers to, and expansion of a transmission system; (DSC)

“transmit”, with respect to electricity, means to convey electricity at voltages of more than 50 kilovolts; (A, TDL, DSC)

“transmitter” means a person who owns or operates a transmission system; (A, MR, TDL, DSC)

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

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

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

“wholesale buyer” means a person that purchases electricity or ancillary services in the IESO-administered markets or directly from a generator; (TDL, DSC)

“wholesale market participant”, means a person that sells or purchases electricity or ancillary services through the IESO- administered markets; (RSC, DSC)

“wholesale supplier” means a person who sells electricity or ancillary services through the IESO-administered markets or directly to another person, other than a Consumer; (TDL, DSC)

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TABLE 1.1 Demarcation Points & Charges for Connection Assets and Disconnection

Rate/Customer Class	Ownership Demarcation Point	Standard Allowance (Basic Connection)	Basic Connection Fee (for Std. Allowance)	Variable Connection Fee	Additional Services charged to customer (as part of Var. Connections)	Service Disconnection Fee (Initiated by customer request)
CLASS 1 **Residential - Single service**						
Overhead	Top of Customer's Service Mast	up to 30 m OH service lines from Distributor's "feed" pole or lines. Includes connections at feed pole or lines, at customer's service mast, and equivalent average credit for transformation equipment.	Recovered through Distributor's rates	Customer charged Actual costs for connection assets beyond standard allowance.	Customers requesting an UG service in OH area will be required to pay 100% connection costs less the Standard allowance for an OH service.	Recovered through Distributor's Tariffs or rates. See Table 2
Underground (Not requiring Transformation Facilities on customer's property)	Line side of customer's Meter Base	equivalent credit to Class 1 Residential Overhead Single Service	Recovered through Distributor's rates	Customer charged Actual costs for connection assets beyond standard allowance, including street crossing. *If customer's load requires transformation facilities on customer's property, refer to "General Service" Rate Class category for Underground service with Transformation.*		Recovered through Distributor's Tariffs or rates. See Table 2
CLASS 2 **General Service 0 - 50 kW**						
Overhead - Single Service	Top of Customer's service mast	equivalent credit to Class 1 Residential Overhead Single Service	Recovered through Distributor's rates	Customer charged Actual costs for connection assets beyond standard allowance.	Additional or redesign due to changes in customer initial proposal; electrical inspections more than standard allowance	Recovered through Distributor's Tariffs or rates. See Table 2
Underground - Single Service	Line side of customer's Main disconnect switch	equivalent credit to Class 1 Residential Overhead Single Service	Recovered through Distributor's rates	Customer charged Actual costs for connection assets beyond standard allowance. inspections more than Standard Allowance and all civil inspections.	Additional or redesign due to changes in customer initial proposal; electrical	Recovered through Distributor's Tariffs or rates. See Table 2

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TABLE 1.2 Demarcation Points & Charges for Connection Assets and Disconnection

Rate/Customer Class	Ownership Demarcation Point	Standard Allowance (Basic Connection)	Basic Connection Fee (for Std. Allowance)	Variable Connection Fee	Additional Services charged to customer (as part of Var. Connections)	Service Disconnection Fee (Initiated by customer request)
CLASS 3-A General Service 50 kW - 999 kW						
Overhead - Single building Bulk Metered or Suite Metering (Not requiring Transformation Facilities on private property)	Top of Customer's service mast	equivalent credit to Class 1 Residential Overhead Single Service	See Table 2	Customer charged Actual costs for connection assets beyond standard allowance.	Additional or redesign due changes in customer initial proposal; electrical inspections more than standard allowance	Customer charged fixed, average costs associated with disconnection and/or removal of connection assets up to the demarcation point. See Table 2
Underground - Single Building Bulk Metered or Suite Metering (Not requiring Transformation Facilities on private property)	Line side of customer's Main disconnect switch	equivalent credit to Class 1 Residential Overhead Single Service	See Table 2	Customer charged Actual costs for connection assets beyond standard allowance, including cable chamber(s), UG conduits as required	Additional or redesign due changes in customer initial proposal; electrical inspections more than Std. Allowance and all civil inspections.	Customer charged actual costs associated with disconnection and/or removal of connection assets up to the demarcation point. See Table 2
Overhead - Single Building Bulk Metered or Suite Metering (Requiring Transformation Facilities on private property)	Line side of customer's Main disconnect switch (secondary UG) OR Top of customer's service mast (secondary OH)	equivalent credit to Class 1 Residential Overhead Single Service	See Table 2	Customer charged Actual costs for connection assets beyond standard allowance, including transformer(s), Tx. connections, associated switching equipment, transformer pole(s), cable chamber(s), UG conduits as applicable.	Additional or redesign due changes in customer initial proposal; electrical inspections more than Std. Allowance and all civil inspections and related feeder switching/scheduling	Customer charged actual costs associated with the disconnection and/or removal of connection assets including cables, transformers and related vault equipment up to the demarcation point and, related feeder switching and scheduling
Underground - Single Building Bulk Metered or Suite Metering (Requiring Transformation Facilities on private property)	Line side of customer's Main disconnect switch or customer's bus	equivalent credit to Class 1 Residential Overhead Single Service	See Table 2	Customer charged Actual costs for connection assets beyond standard allowance, including transformer(s), Tx. connections, associated switching equipment, transformer pads, transformer vaults, cable chambers,cable pull rooms, UG conduits and cabling and road crossing (as applicable)	Additional or redesign due changes in customer initial proposal; electrical inspections more than Std. Allowance and all civil inspections and related feeder switching/scheduling	Customer charged actual costs associated with the disconnection and/or removal of connection assets including cables, transformers and related vault equipment up to the demarcation point and related feeder switching and scheduling

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TABLE 1.3 Demarcation Points & Charges for Connection Assets and Disconnection

Rate/Customer Class	Ownership Demarcation Point	Standard Allowance (Basic Connection)	Basic Connection Fee (for Std. Allowance)	Variable Connection Fee	Additional Services charged to customer (as part of Var. Connections)	Service Disconnection Fee (Initiated by customer request)
CLASS 3-B General Service 50 kW - 999 kW						
Underground (Multi-units or Townhouse Complex with Transformation Facilities on private property other than supplied from primary distribution systems built along private streets)	(Bulk meter) First point of connection past transformers on private property as applicable, i.e. a) Tx. Secondary spade b) cable chamber c) tap box d) meter center	equivalent credit to Class 1 Residential Overhead Single Service	See Table 2	Customer charged Actual costs for connection assets beyond standard allowance, including transformer(s), associated switching equipment, transformer pads, transformer vaults, cable chambers, connections in cable chamber(s), tap boxes excess UG conduit & cabling.	Additional or redesign due to changes in customer initial proposal; electrical inspections more than Std. Allowance and all civil inspections and related feeder switching/scheduling	Customer charged actual costs associated with the disconnection and/or removal of connection assets including cables, transformers and related vault equipment up to the demarcation point and related feeder switching and scheduling See Table 2
	(Townhouse individual meter) line side of individual meter base	equivalent credit to Class 1 Residential Overhead Single Service applied to each meter	Recovered through Distributor's rates	Customer charged Actual costs for connection assets beyond standard allowance.		Recovered through Distributor's Tariffs or rates.
Underground (Multi-units or Townhouse Complex with NO Transformation Facilities on private property or supplied from primary distribution system built along private streets)	(Bulk meter) First point of connection past Distributor's system onto private private as applicable I.e. a) cable chamber b) tap box c) meter center	equivalent credit to Class 1 Residential Overhead Single Service	See Table 2	Customer charged Actual costs for connection assets beyond standard allowance, including cable chamber(s), excess UG conduit and cabling.	Additional or redesign due to changes in customer initial proposal; electrical inspections more than Std. Allowance and all civil inspections.	Customer charged actual costs associated with the disconnection and/or removal of connection assets up to the demarcation point See Table 2
	(Townhouse individual meter) line side of individual meter base	equivalent credit to Class 1 Residential Overhead Single Service applied to each meter	Recovered through Distributor's rates	Customer charged Actual costs for connection assets beyond standard allowance.		Recovered through Distributor's Tariffs or rates.
CLASS 3-C Residential Subdivision (development with more than 5 lots)	Line side of customer's meter base (UG) Top of Customer's service mast (OH)	equivalent credit to Class 1 Residential Overhead Single Service	See Table 2	blended costs net of basic allowance credit		Recovered through Distributor's Tariffs or rates.
CLASS 4 & 5 General Service 1000kW and Up						
Underground Single/Multiple Building Bulk Metered or Suite Metering (Requiring Transformation Facilities on private property)	Line side of Customer's main bus	equivalent credit to Class 1 Residential Overhead Single Service	See Table 2	Customer charged Actual costs for connection assets beyond standard allowance, including transformer(s), Tx. connections, associated switching equipment, transformer pads, transformer vaults, cable chambers, cable pull rooms, UG conduits, excess cabling and street crossings	Additional or redesign due to changes in customer initial proposal; electrical inspections more than Std. Allowance and all civil inspections and related feeder switching/scheduling	Customer charged actual costs associated with the disconnection and/or removal of connection assets including cables, transformers and related vault equipment up to the demarcation point and related feeder switching and scheduling See Table 2
Underground Single/Multiple Building Bulk Metered or Suite Metering (Customer owned Sub-Station) (Requiring Transformation Facilities on private property)	Pot head Terminations at line side of Customer's High Voltage Switchgear	equivalent credit to Class 1 Residential Overhead Single Service	See Table 2	Customer charged Actual costs for connection assets beyond standard allowance, including cable chamber(s), cable pullroom, excess UG conduit and cabling and street crossing	Additional or redesign due changes in customer initial proposal; electrical & Swgr inspections more than Std. Allowance; all civil inspection and related feeder switching/ scheduling; additional Hi-pot, protection & control relays, wiring and relay settings associated with pilot wire prot. or other extra reliability systems	Customer charged actual costs associated with the disconnection and/or removal of connection assets including related feeder switching and scheduling See Table 2

Note: Individual Suite Metering will negate the Transformer Allowance Discount

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TABLE 2 - Service Connection and Disconnection Fee

IMPORTANT:
The range of services listed below may not be applicable in all districts due to the restrictions imposed by the distribution system in certain areas

Rate/Customer Class	Ownership Demarcation Point	Service Connection Fee (*) (Subject to annual review)	Service Disconnection Fee (Initiated by Customer)
CLASS 1 - Residential - Single service			
Overhead	Top of Customer's Service Mast	- Standard Basic Connection recovered through hydro rates ($1,315.00)	(No charge - Recovered through rates)
Underground (Not requiring Transformation Facilities on customer's property)	Line side of customer's Meter Base	- Variable Connection Charges collected directly from the Customer	(No charge - Recovered through rates)
CLASS 2 - General Service 0 - 50 kW			
Overhead - Single Service	Top of Customer's service mast	- Standard Basic Connection recovered through hydro rates ($1,315.00)	(No charge - Recovered through rates)
Underground - Single Service (Not requiring Transformation Facilities on customer's property)	Line side of customer's Main disconnect switch	- Variable Connection Charges collected directly from the Customer	(No charge - Recovered through rates)
CLASS 3A - General Service 50 kW - 999 kW			
Overhead - Single Service (Not requiring Transformation Facilities on private property)	Top of Customer's service mast	- Standard Basic Connection recovered through hydro rates ($1,315.00) - Variable Connection Charges collected directly from the Customer	All Service sizes : $250.00
Underground - Single Service (Not requiring Transformation Facilities on private property)	Line side of customer's Main disconnect switch	- Standard Basic Connection recovered through hydro rates ($1,315.00) - Variable Connection Charges collected directly from the Customer	(Variable Disconnection Charge collected directly from the customer)
(Requiring Transformation Facilities on private property)	Line side of customer's Main disconnect switch or customer's bus	- Standard Basic Connection recovered through hydro rates ($1,315.00) - Variable Connection Charges collected directly from the Customer	(Variable Disconnection Charge collected directly from the customer)
CLASS 3B - General Service 50 kW - 999 kW			
Underground (Multi-units or Townhouse Complex with Transformation Facilities on private property other than supplied from primary distribution systems built along private streets)	(Bulk meter) First point of connection past transformers on private property a) Tx. Secondary spade b) meter center c) cable chamber d) tap box	- Standard Basic Connection recovered through hydro rates ($1,315.00) - Variable Connection Charges collected directly from the Customer	(Variable Disconnection Charge collected directly from the customer)
	(Townhouse individual meter) Line side of customer's Meter Base		(No charge - Recovered through rates)
Underground (Multi-units or Townhouse Complex with NO Transformation Facilities on private property or supplied from primary distribution system built along private streets)	(Bulk meter) First point of connection past Distributor's system onto private a) tap box b) meter base/center c) cable chamber	- Standard Basic Connection recovered through hydro rates ($1,315.00) - Variable Connection Charges collected directly from the Customer	(Variable Disconnection Charge collected directly from the customer)
	(Townhouse individual meter) Line side of customer's Meter Base	- Standard Basic Connection recovered through hydro rates ($1,315.00) - Variable Connection Charges collected directly from the Customer	(No charge - Recovered through rates)
CLASS 3C			
Residential Subdivision (development with more than 5 lots)	Line side of customer's Meter Base Top of Customer's Service Mast	- Standard Basic Connection recovered through hydro rates ($1,315.00) - Variable Connection Charges collected directly from the Customer	(No charge - Recovered through rates)
CLASS 4 & 5 - General Service 1000kW and Up			
Underground (Requiring Transformation Facilities on private property)	Line side of Customer's main bus	- Standard Basic Connection recovered through hydro rates ($1,315.00) - Variable Connection Charges collected directly from the Customer	(Variable Disconnection Charge collected directly from the customer)
Underground (Customer owned Sub-Station)	Pot head Terminations at line side of Customer's High Voltage Switchgear	- Standard Basic Connection recovered through hydro rates ($1,315.00) - Variable Connection Charges collected directly from the Customer	(Variable Disconnection Charge collected directly from the customer)

(*) Typical connection costs by Class of Customers are available upon request

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TABLE 3 – NEW OR UPGRADED STREET LIGHTING SERVICES – POINT OF DEMARCATION AND CONNECTION CHARGES

Types of Street Lighting. Distribution Systems	Ownership Demarcation Point	Standard Allowance	Basic Connection Fee (subject to annual review)	Variable Connection Fee (**)
Municipal Lights attached to Distributor's pole and connected to Distributor's 120/240V "house lighting" secondary bus/lines	a) line side of protective device (i.e. fuse, disconnect switch) b) If no protective device, point of connection on Distributor's feed pole/lines	Connections at Distributor's feed pole/lines.	$365.00	
Municipal Street Lighting branch circuits and equipment (lights) attached to Distributor's poles	Line side of the first protective device protecting the Street Lighting branch circuit	Connections at Distributor's feed pole/lines.	$365.00	Customer charged actual costs for connection assets above and beyond Standard Allowance (e.g. OH service lines or UG conduit and cables; additional connections)
Municipal Street Lighting branch circuits, poles, and equipment /lights *overhead* supplied (i.e. Municipal Street Lighting plant) totally separate from Distributor's system	Line side of the first protective device	Connections at Distributor's feed pole/lines or at Municipal – Street Lighting Plant	$580.00	Customer charged actual costs for connection assets above and beyond Standard Allowance (e.g. OH service lines or UG conduit and cables; additional connections)
Municipal Street Lighting branch circuits, poles and equipment /lights *underground* supplied (i.e. Municipal Street Lighting plant) totally separate from Distributor's system	Line side of the connector/splice or fuse within the Customer's facility or plant. (*)	Connections at closest physical infrastructure to underground Distribution plant.	$580.00	Customer charged actual costs for connection assets above and beyond Standard Allowance (e.g. Cable Chamber/Vault breakout; UG conduit and cables; additional connections)

* Electrical circuits that are part of the Toronto Hydro underground infrastructure (i.e. concrete encased duct bank, vault, and cable chamber systems) are owned and operated by Toronto Hydro. Consulting and engineering work is not included and may be separately charged

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Table 4 – Customer Owned Transformers (Article 3.4.1)

Transformer Voltage		Recommended Primary Tap Voltage					
Primary	Secondary	+5%	+2½%	0	-2 ½%	-5 %	-7 ½%
27600 grd.Y/16000	less than 750	28980	28290	27600	26910	26220	
27600 grd.Y/16000	13800 grd.Y/8000						
27600	2400/4160 Y		28290	27600	26910	26220	25530
13860	2400/4160 Y		14206	13860	13513	13167	12820
13860 13860 grd.Y/8000	less than 750	14553	14206	13860	13513	13167	

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Table 5 Meter Sockets (Article 2.3.7.1.2)

SELF-CONTAINED SOCKET METERING			
Voltage	Phase	Wire	Maximum Service Switch Size Rating Amperes
120/240	1	3	200
120/240	1	3	400 *
208/120	2	3	200
208/120	3	4	200
600/347	3	4	200
600 **	3	3	200

* Meter socket contains a 3 wire current transformer and transformer type meter.

** Used only for existing services where grounded supply is not available

Notes:
1. Only CSA approved meter sockets are to be used.
2. Meter sockets shall be mounted so that the midpoint of the meter is set at 1700 mm ± 100 mm.
3. Where the supply is grounded, 600 V. metering shall be 4 wire. Where the Customer does not require a neutral, a full size neutral conductor sized in accordance with Table 17 of the Ontario Electrical Safety Code must be provided to all meter cabinets or sockets. The neutral conductor is to be terminated in the socket (or cabinet) on an insulated block in accordance with the Ontario Electrical Safety Code.

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Table 6 Meter Cabinets (Article 2.3.7.1.2)

METER CABINETS				
Voltage	Phase	Wire	Main Switch Size in Amperes	Meter Cabinets (see description below)
120/240	1	3	Over 400	A
208/120 416/240 600/347	3	4	Over 200 – 800	A
			Over 800	B
600*	3	3	Over 200 – 400	A
			Over 800	B

***** Only for existing services where grounded supply is not available.

Meter Cabinet Descriptions

A – 48” x 48” x 12” complete with removable 44” x 44” backplate.
B – 36” x 36” x 12” connected to switchgear instrument transformer compartment.

Notes: 1. Meter cabinets shall be fabricated of minimum # 16 gauge steel.

2. Cabinets shall have side-hinged doors opening at the center and be equipped with three-point latching and provision for padlocking.

3. The maximum distance from the floor to the top of the cabinet shall be 1830 mm.

4. Where two or more circuits are used in one meter cabinet, Toronto Hydro will issue specific metering requirements.

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Table 7 Instrument Transformers and Enclosures (Article 2.3.7.2)

Metering Transformers and Compartments						
Voltage (Volts)	Phase	Wire	Service Size (Amperes)	Compartment Size	Number of Metering Transformers (Provision for)	
					Current	Voltage
240/120 208/120 N/W	1 3	3 3	Up to 800	A	1 or 2	0
			Over 800 Up to 4000	B		
208 / 120 416 / 240 600 / 347	3	4	Up to 800	A	3	3
			Over 800 Up to 4000	B	3	
600 (*)	3	3	Up to 800	A	2	2
			Over 800 Up to 4000	B	2	
Voltages up to 600	3 (*) 3	3 (*) 4	Over 4000	C	2 3	2 3

***** Only for existing services where grounded supply is not available.

COMPARTMENT SIZES [width x height x depth (from CT mounting plate)]

A - 762mm x 762mm x 210mm (30" x 30" x 8.25")
B - 965mm x 762mm x 324mm (38" x 30" x 12.75")
C - 965mm x 914mm x 381mm (38" x 36" x 15")

NOTES: 1. Instrument transformers will be provided by Toronto Hydro and shall be installed in the switchgear by the manufacturer. The manufacturer shall not disassemble and/or change in any manner the Toronto Hydro equipment sent to the manufacturer.

2. Voltage transformer connections shall be connected on the line side of the current transformers. Current transformers shall be installed with their polarity marks towards the incoming Toronto Hydro supply.

Section 5 – TABLES

Table 8 Meter Centres (Article 2.3.7.1.2)

Meter centers may be used for 750 V applications or less, as far as they meet the following specifications:

1) Side-hinged doors or panels shall be installed over all sections of the switchboard where Toronto Hydro may be required to work, such as unmetered sections and those sections containing breakers, switches and meter mounting devices. Hinged doors or panels shall have provision for sealing and padlocking in the closed position. Where bolts are used, they shall be of the captive knurled type. The hinged covers over breakers or switches shall be so constructed that the covers cannot be opened when sealed or padlocked.
2) Breakers or switch handles shall have provision for positive sealing and padlocking in the "off" position.
3) Meter mounting devices shall be wired so as to be on the "load" side of the breakers or switches.
4) Each combination meter socket and breaker panel shall have adequate space for permanent Customer identification with respect to street address and/or unit number.
5) The centre of the bottom row of meter sockets shall be not less than 600 mm from the finished floor. The centre of the top row of meter sockets shall be not less than 1800 mm from the finished floor.
6) The distance between adjacent meter socket rims in the horizontal plane shall not be less than 152 mm.
7) The distance between adjacent meter socket rims in the vertical plane shall be as follows:
    a) For 100 A., 4 or 5 jaw , not less than 76 mm.
    b) For 100 A., 7 jaw, not less than 152 mm.
8) The meter mounting socket and sealing ring shall be acceptable to Toronto Hydro.
9) Where a neutral is required, the meter mounting device shall have a pre-wired, ungrounded neutral connection to the 5th or 7th terminal. The connection, if not made directly to the neutral bus, shall be not less than #12 AWG copper or equivalent.

Section 5 – TABLES

Table 9

Toronto Hydro Distribution Construction Standards Price List

	Title Section	*Individual Section Cost ($) (GST not Included)*
0	Index	N/A
1	How to use the Standards, General Info	100
2	Material Index	500
3	Clearances	500
4	Poles and Pole Settings	1,500
5	Poles Framing	2,500
6	RESERVED FOR FUTURE USE	N/A
7	Anchoring & Guying	1,000
8	Overhead Conductors and Connectors	1,000
9	Overhead Transformers	1,000
10	Overhead Switches	1,000
11	Overhead Primary and Secondary Services	1,000
12	Secondary and Primary Service Risers	1,000
13	Underground Transformers and Switchgears	3,500
14	Padmounted Transformers	1,000
15	Underground Secondary and Primary Services	1,000
16	Underground Cable, Terminations, Joints	3,500
17	Revenue Metering	200
18	Grounding	200
19	Surge Arresters	200
20	Faulted Circuit Indicators	200
21	OH & UG Stenciling	1,000
22	Water Heaters	200
23	Foreign Attachments	500
24	Fusing	500
25	OH & UG Material Catalogue	500
26	RESERVED FOR FUTURE USE	N/A
27	Legend/Drafting Symbols	100
28	OH & UG Material Fabrications	500
29	RESERVED FOR FUTURE USE	N/A
30	Street Lighting	3,000
31	Civil Construction	4,000
32	Telecommunications	1,000
33	Supplementary Compatible Units	N/A
34	Engineering information/References	200
	Cost of complete set of Standards	***16,000***
	Maintenance charge per year (full set of updates)	***1,000***

For purchasing Construction Standards please contact the supervisor of Standards

Section 6 – REFERENCES

REFERENCES

1. **Economic Evaluation Model for Distribution System Expansion**
   Refer to Appendix B of the Distribution System Code:
   "Methodology and Assumptions for an Economic Evaluation"

2. **Standard Toronto Hydro Connection Agreements and Terms of Conditions**
   - Schedule A:
     - Toronto Hydro-Electric System Limited Connection Agreement
   - Schedule B1:
     - Micro-Embedded Generation Facility Connection Agreement
   - Schedule B2:
     - Form of Connection Agreement for a Small, Mid-Sized, and Large Embedded Generation Facility
   - Schedule B3:
     - Connection Agreement for an Embedded Generation Facility Larger than 10 MW
   - Schedule C:
     - Wholesale Market Participant Connection Agreement Terms and Conditions
   - Schedule C:
     - Wholesale Market Participant Connection Agreement Terms and Conditions

3. **Toronto Hydro Parallel Generation Requirements**

4. **Toronto Hydro Requirements for the Design & Construction of Customer-Owned High Voltage Substations**

5. **THESL Requirements for Customer-Owned Structures**

6. **THESL Metering Requirements 750 Volts or Less**

7. **Metering Requirements for 13.8 kV & 27.6 kV Customer-Owned Substations**

8. **Construction Contractor Qualification Application for Contestable Work**