Conditions of Service

	Thunder Bay Hydro Electricity Distribution Inc.	
Revised By: D. Zimak, Vice President, Power Systems	**Date:** January 18, 2016	**Rev.# 3**

Revision Sheet

Revision	Description	Date	Initial
0	Original document prepared by E.D. July 2007 and approved by Thunder Bay Hydro Board	August 23, 2007	RW
1	Appendix E. Updated with Miscellaneous Charges per Rate Order Approval	September 16, 2009	RW
2	Clarifications to Unmetered Services Section 1.6.1 and Section 3.8	December 4, 2014	KB
3	Revisions to document to reflect changes in Distribution System Code and changes in standards.	January 18, 2016	KB

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APPENDICES

SECTION 1: INTRODUCTION

The purpose of this document is to provide a means of communicating the types and level of electrical service available to Thunder Bay Hydro Electricity Distribution Inc. (TBHEDI) electricity distribution customers. TBHEDI service area boundaries currently correspond to the boundaries of the City of Thunder Bay and Fort William First Nation Reserve # 52. The Ontario Energy Board, through its Distribution System Code (referred to in these Conditions of Service as the "DSC"), 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 resolution in the event that a dispute cannot be resolved without the Board' s intervention.

"SECTION 1: INTRODUCTION" contains references to the Customer's and TBHEDI rights, the dispute resolution process and legislation that cover these Conditions of Service.

"SECTION 2: DISTRIBUTION ACTIVITIES (GENERAL)" contains references to services and requirements, which span across all customer classes. This section covers such items as Rates, Billing, Hours of Work, Emergency Response, Power Quality, Available Voltage, etc.

"SECTION 3: DISTRIBUTION ACTIVITIES (CUSTOMER CLASS SPECIFIC)" contains references to services and requirements, which are specific to individual customer classes in addition to those outlined in "Distribution Activities (General)". This section would cover such items as Metering, Service Entrance Requirements, Delineation of Ownership, Special Contracts, etc.

"SECTION 4: GLOSSARY OF TERMS" contains a variety of terms that are defined in the context of this document. Where possible, the definitions in the glossary correspond to definitions in existing documents that apply to TBHEDI, such as the Distribution System Code and the Standard Supply Service Code, and TBHEDI Distributor License. The text of the Conditions of Service document is used to expand on these definitions as applicable to TBHEDI.

"SECTION 5: APPENDICES" contains a variety of documents that may be appended to the Conditions of Service.

A Revision Summary of the latest revisions to the Conditions of Service is posted on TBHEDI's website. Comments to these revisions can be emailed to cos@tbhydro.on.ca TBHEDI will file to the Ontario Energy Board a summary of public comments received from customers about the changes.

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

1.1 Identification of Distributor and Service Area

Thunder Bay Hydro Electricity Distribution Inc., referred to herein as "TBHEDI," is a corporation incorporated under the laws of the Province of Ontario to distribute electricity.

TBHEDI is licensed by the Ontario Energy Board ("OEB") to supply electricity to Customers in accordance with Electricity Distribution Licence ED-2002-0529 issued to TBHEDI on October 9, 2003, by the Ontario Energy Board ("Distribution Licence"). Additionally, there are requirements imposed on TBHEDI by the various codes referred to in the Licence and by the *Electricity Act, 1998*, and the *Ontario Energy Board Act, 1998.*

TBHEDI may only operate distribution facilities within the service area defined in Schedule 1 of its Distribution Licence. This service area is subject to change with the Ontario Energy Board's approval, but is currently limited to the boundaries of the City of Thunder Bay as of January 1, 1970, and Fort William First Nation Reserve #52.

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

1.1.1 Distribution System Overview

TBHEDI distributes electrical power through both an overhead and underground feeder network operating at a primary voltage of 24 kV. This 24 kV primary system is a radial loop system with open points between interconnections. These feeders supply distribution transformers directly or indirectly through either a 12 kV, or 4 kV sub-distribution system. The supply of electricity by TBHEDI to any Customer will be at the 24 kV (Urban) and 12 kV (Rural) primary voltage level where available as the 4 kV distribution system is not being expanded, and will ultimately be phased out. Connections to the 4 kV system will be allowed on a case by case basis where other options are limited.

1.2 Related Codes and Governing Laws

The supply of electricity or related services by TBHEDI to any Customer shall be subject to various laws, regulations, and Codes, including the provisions at any given point in time of:

1. *Electricity Act*, *1998*
2. *Ontario Energy Board Act, 1998*
3. Distribution Licence ED-2002-0529
4. Affiliate Relationships Code
5. Distribution System Code
6. Retail Settlement Code
7. Standard Service Supply Code
8. Ontario Electrical Safety Code

In the event of a conflict between: (a) these Conditions of Service; and (b) the provisions of the *Electricity Act, 1998*, the *Ontario Energy Board Act, 1998* (the "Acts"), the Distribution Licence or regulatory Codes issued by the Ontario Energy Board; the provisions of the Acts, the Distribution Licence 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, any electrical work carried out by a Customer or its agent(s), 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 Infrastructure Health and Safety Association (IHSA), Electrical Utility Safety Rulebook (EUSR), traffic requirements, and TBHEDI's Safety Policies available on request.

Any reference to a document includes all amendments to that document or that provision of the document currently in force.

1.3 Interpretation

In these Conditions of Service, unless the context otherwise requires:

- Headings, paragraph numbers and underlining are for convenience only and do not affect the interpretation of these Conditions;
- Words referring to the singular include the plural and vice versa;
- Words referring to a gender include any gender;
- The word "person" includes a firm, a body corporate, an unincorporated association, or an authority;
- Where there is a reference to a number of days between two events, they shall be counted by excluding the day on which the first event occurred and including the day on which the second event occurs; and

- Any event that is required under these Conditions to occur on or by a stipulated date, which is a holiday, may occur on or by the next business day.

1.4 Amendments and Changes

These Conditions of Service have been duly approved and authorized by TBHEDI.

TBHEDI may add to, revoke, alter or amend these Conditions of Service as it sees fit, and such addition, revocation, alteration, or amendment shall, as from the time of notification by Customer bill insert, posting on the TBHEDI website or publication in a local newspaper, be deemed to apply from the time of such notification as if it had been included in these Conditions of Service.

The provisions of these Conditions of Service and any amendments made from time to time form part of any contract made between TBHEDI and any connected Customer, Retailer, or Generator. These Conditions of Service supersede all previous Conditions of Service, oral or written, of TBHEDI, as of its effective date.

In the event of changes to these Conditions of Service, TBHEDI will issue a notice with its Customer bills and on TBHEDI's Website http://www.tbhydro.on.ca. TBHEDI may also issue a public notice in a local newspaper.

The Customer, Retailer, or Generator is responsible for contacting TBHEDI to ensure they have the current version of the Conditions of Service. Upon request, each customer is entitled to one copy per revision of the Conditions of Service. TBHEDI may charge a reasonable fee for providing additional copies of this document.

The current version of this document is also posted on the TBHEDI website and can be downloaded from http://www.tbhydro.on.ca/

1.5 Contact Information

1.5.1 General Enquiries

Customers may contact TBHEDI using one of the following methods:

- **Telephone:** (807) 343-1111. Our offices are open Monday to Friday, excluding statutory holidays, from 8:30 a.m. to 4:30 pm
- **Fax:** (807) 343-0230
- **Web:** http://www.tbhydro.on.ca
- Customer Service Inquiries
  Email: customer_services@tbhydro.on.ca
- Connection Inquiries (Customer, Generator, Distributor)
  Email: connections@tbhydro.on.ca
- **Mail:** Thunder Bay Hydro Electricity Distribution Inc.
  34 Cumberland Street N.
  Thunder Bay, ON P7A 4L4

1.5.2 Emergencies and Service Interruptions

The following numbers can be contacted for electrical emergencies:

(1) 24 hours a day, 7 days a week: (807) 343-1002
(2) For emergency "Cable Locates:"

- During regular hours (8:00 am to 4:30 pm., Monday to Friday): 1-800-400-2255
- After hours Cable Locates: 1-800-400-2255

1.5.3 New Connections Contact Information

The following departments can be contacted with specific enquiries during regular hours:

1. POWER SYSTEMS OFFICE

   (a) For new residential service connections (up to 200-amps) call (807) 343-1176
   (b) For new general service connections (200-amps single-phase), call (807) 343-1176
   (c) For temporary services, call (807) 343-1176

2. ENGINEERING DEPARTMENT

   (a) For new general service connections or upgrades (three-phase, or single-phase over 200-amps), call (807) 343-1168
   (b) For new residential services over 200-amps, call (807) 343-1168
   (c) For new underground subdivision development electrical servicing, call (807) 343-1005
   (d) For generation connections, call (807) 343-1037
   (e) For underground cable locating, call 1-800-400-2255

1.6 Customer Rights

1.6.1 Customer

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

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

Notwithstanding the above, neither TBHEDI nor the Customer shall be liable to the other party 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 TBHEDI, its directors, officers, employees and agents from any claims made by any third parties in connection with the construction and installation of electrical equipment or apparatus, by or on behalf of the Customer.

Customers experiencing outages or other disturbances will be advised, upon request, of the cause of the outages.

A Customer has the right to demand identification from any person representing themselves to be an authorized agent or employee of TBHEDI.

A Customer has the right to access current meter and price data, and to interrogate the meter or to assign this right to others, in accordance with any relevant technical specifications and codes. A Consumer shall pay the reasonable cost of any software, hardware or other services required for the Consumer to obtain direct access to meter information.

A Customer with an unmetered service connection has the right to request information regarding load and price data from Thunder Bay Hydro. A Customer has the right to request changes to information on file with respect to their unmetered load. Thunder Bay Hydro has an obligation to respond to all Customer requests for information regarding load or price data and changes to information regarding load received from the customer.

A Customer has the right to receive historical consumer-specific usage, meter and payment data as defined in the Retail Settlement Code. A fee may apply.

1.6.2 Embedded Generator

TBHEDI shall only be liable to an embedded generator and an embedded generator shall only be liable to TBHEDI for any damages that arise directly out of the willful misconduct or negligence:

- of TBHEDI in providing distribution services to the embedded generator;
- of the embedded generator in being connected to TBHEDI's distribution system; or
- of TBHEDI or embedded generator in meeting their respective obligations under these Conditions, their licenses and any other applicable law.

Notwithstanding the above, neither TBHEDI nor the embedded generator shall be liable to the other party 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 embedded generator shall indemnify and hold harmless TBHEDI, its directors, officers, employees and agents from any claims made by any third parties in connection with the construction and installation of a generator by or on behalf of the embedded generator.

1.6.3 Embedded Distributor

TBHEDI shall only be liable to an embedded distributor and an embedded distributor shall only be liable to TBHEDI for any damages that arise directly out of the willful misconduct or negligence:

- of TBHEDI in providing distribution services to the embedded distributor;
- of the embedded distributor in being connected to TBHEDI's distribution system; or
- of TBHEDI or embedded distributor in meeting their respective obligations under these Conditions, their licenses and any other applicable law.

Notwithstanding the above, neither TBHEDI nor the embedded distributor shall be liable to the other party 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 embedded distributor shall indemnify and hold harmless TBHEDI, its directors, officers, employees and agents from any claims made by any third parties in connection with the construction and installation of a distribution system by or on behalf of the embedded distributor.

1.7 Distributor Rights

TBHEDI shall comply with its Conditions of Service but may waive a provision of its Conditions of Service in favour of a Customer or potential Customer at TBHEDI's sole discretion.

TBHEDI will undertake the necessary programs to maintain and enhance its distribution plant at its expense, as part of its planned activities during normal business hours, Monday to Friday. Where a Customer requests that such planned activities occur outside normal working hours, then the Customer shall pay the incremental costs.

TBHEDI will provide standard overhead or underground supply services to Customers. If a Customer requests special construction beyond the normal TBHEDI standard

installation in accordance with the program, the Customer shall pay any incremental costs.

1.7.1 Access to Customer Property

TBHEDI shall have unimpeded access to the Customer's property in accordance with Section 40 of the *Electricity Act*, *1998* and any successor acts thereto.

TBHEDI shall install, maintain, and replace infrastructure that is part of its main distribution system that may be located on private property and which serve Customers that are located outside of that private property. These TBHEDI infrastructures will require an easement.

1.7.2 Safety of Equipment

The Customer shall comply with all applicable laws, including but not limited to the Ontario Electrical Safety Code. The Customer shall ensure that equipment is properly identified and connected for metering and operational purposes. The Customer will take whatever steps necessary to correct any deficiencies, within 72 hours or a mutually agreeable time period from written notice by TBHEDI to the Customer. If the Customer does not take such action within this time frame, TBHEDI shall disconnect the supply of power to the Customer as described in Section 2.2 Disconnection.

The Customer shall not build, cause to be built, maintain any structure, or plant any trees, shrubs or landscaping etc., that, in the sole opinion of TBHEDI, may affect the safety, reliability, accessibility, or efficiency of TBHEDI's distribution facilities.

The Customer shall not access, use or interfere with the distribution facilities of TBHEDI except in accordance with a written agreement. All connections, disconnections, or reconnections of TBHEDI's distribution facilities (i.e. the supply side of the Customer's service entrance) must be performed by TBHEDI employees or its appointed agents and shall be arranged in advance by the Customer or its contractor. The Customer must also grant the right to seal, secure, and/or prevent from tampering any point where a connection may be made on the supply side of the metering equipment.

In the event that TBHEDI believes that its equipment is being interfered with, TBHEDI will notify the Customer and permit the Customer to remove the interference (provided there is no imminent danger of safety situation being caused by the interference). In the event that: (a) the Customer does not remove the interference; or (b) the interference constitutes an imminent danger or safety situation; then TBHEDI may disconnect the electrical service to the Customer and/or remove the interference.

1.7.3 Operating Control

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

The Customer shall not allow anyone other than an employee, or authorized agent of TBHEDI, or a Person lawfully entitled to do so, to repair, remove, replace, alter, inspect, or tamper with TBHEDI facilities and equipment on the Customer's premises.

Customers will be required to pay the cost of repairs or replacement of TBHEDI'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 the Customer's premises or on the public road allowance, where TBHEDI's responsibility for operational control of distribution equipment ends, is defined by the Distribution System Code as the "operational demarcation point."

In emergency situations, TBHEDI may be required to operate Customer equipment.

1.7.4 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 TBHEDI's distribution system within 72 hours or a mutually agreeable time period from written notice by TBHEDI to the Customer. If the Customer does not take such action within this time frame, TBHEDI may disconnect the supply of electricity to the Customer as described in Section 2.2 Disconnection.

In such cases where public safety is a concern or the defective equipment may affect the integrity or reliability of TBHEDI's distribution system, TBHEDI reserves the right in its sole discretion to disconnect the supply of electricity to the Customer without notice.

1.7.5 Customer's Physical Structures

The construction and maintenance of all civil works on private property owned by the Customer, including but not limited to poles, switches, meter bases, underground conduits, grounds, transformer vaults and transformer pads, will be the responsibility of the Customer.

TBHEDI shall be notified of all civil work on private property, and where required, such work will be inspected and accepted by TBHEDI and the Electrical Safety Authority.

It will be the Customer's responsibility to relocate physical structures on their property. TBHEDI will make a best effort to notify the Customer to relocate the Customer's physical structures on their property impeding the repair or replacement of electrical facilities. However, in power outage situations, TBHEDI may remove the Customer's physical structures to provide access to repair or replace facilities. In all cases, it shall be the Customer's responsibility to restore their physical structures.

Where the Customer installs physical structures impeding access or not meeting minimum clearances to electrical facilities requiring repair or replacement, TBHEDI may decide to relocate the facilities. The Customer will be responsible to pay the incremental costs to relocate facilities.

1.7.6 Tree and Vegetation Management

To ensure public safety and the continued reliable operation of its distribution system, TBHEDI 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.

TBHEDI will coordinate and maintain tree clearance around all its distribution lines that are located on public allowance. TBHEDI will also maintain tree clearances around TBHEDI owned overhead lines that may be located on private property (i.e. in an easement) at no cost to the Customer, at the discretion of the utility. TBHEDI 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, TBHEDI may be unable to notify the property owner prior to performing the work.

Customers are responsible for tree trimming and tree and brush removal around service lines that are located on private property when these lines are owned by the Customer. Clearances must conform to the Electrical Safety Code.

TBHEDI will disconnect and reconnect the Customer's supply without charge once per year to permit the safe clearance of trees and vegetation. This will occur during normal business hours with ten (10) days' notice.

1.7.7 Force Majeure

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

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

(a) Promptly notify the other party of the Force Majeure event and its assessment in good faith of the effect that the event will have on its ability to perform any of its obligations. If the immediate notice is not in writing, it shall be confirmed in writing as soon as reasonably practical;
(b) Not be entitled to suspend performance of any of its obligations under these Conditions of Service to any greater extent or for any longer time than the Force Majeure event requires it to do;
(c) Use its best efforts to mitigate the effects of Force Majeure event, remedy its inability to perform, and resume full performance of its obligations;
(d) Keep the other party continually informed of its efforts;
(e) Provided written notice to the other party when it resumes performance of any obligations affected by the Force Majeure event; and
(f) If the Force Majeure event is a strike or lockout of TBHEDI's employees or authorized agents, TBHEDI shall be entitled to discharge its obligations to notify Customers in writing by placing an ad in the local newspaper.

1.8 Disputes

1.8.1 Customers

Any Customer or Embedded Generator with a complaint or dispute against TBHEDI shall submit it to TBHEDI in writing via fax, email or regular mail. Each inquiry shall be date stamped and recorded according to the date it was received.

Upon receipt, TBHEDI shall investigate the cause of the complaint or dispute, and attempt in good faith to resolve the situation within ten (10) business days of receipt. If the situation is expected to exceed ten (10) business days, then the complainant will be notified of the delay and the reasons why it cannot be resolved within ten (10) business days. The resolution period will not exceed thirty (30) business days unless extenuating circumstances apply and mutual agreement is made between both parties.

Any disputes that lead to legal action against TBHEDI shall be referred to our legal counsel. Disputes that remain unresolved shall be referred to an Ontario Energy Board approved third party complaints resolution services. As of the effective date of these Conditions of Service, the Ontario Energy Board had not yet approved a third party complaints resolution service, and was performing that function itself. Until such a complaints resolution service is appointed, any unresolved complaints shall be referred to the Ontario Energy Board.

Records will be kept of all complaints and disputes, including the complainant's name, the nature of the dispute, the resolution or escalation date, and the dispute's resolution or status.

1.8.2 Retailers

Disputes between a retailer and TBHEDI shall be settled in accordance with Article 6 of the Retailer Service Agreement.

SECTION 2: DISTRIBUTION ACTIVITIES (GENERAL)

2.1 Requests for Service

Well in advance of installation commencement, the Customer shall make a request for electrical service. Such request must provide adequate lead time to permit acquisition of major materials and the scheduling of the appropriate work crews. If special equipment is required or equipment delivery problems occur, then longer lead times may be necessary. For service connections that require a system expansion or enhancement, Customer's may experience lead times of one year. Where system expansions are not required, Customers may experience lead times up to three months, subject to material availability. TBHEDI will notify the Customer of any anticipated extended lead times at the time of the Estimate to Connect.

A Customer (or its authorized representative) shall apply in writing to TBHEDI for any new or upgraded electricity services. These new service connection requests are treated by TBHEDI as falling into one of the following two categories:

(1) Building that "Lies Along":
These are for new service connections where the property is presently serviced with lines along the Customer's property that have sufficient capacity to supply the proposed new load.

(2) Expansions and Enhancements:
These are for new service connections where the distribution system requires an expansion or enhancement to serve the proposed load. These can take the form of a line extension or a reinforcement of an existing circuit. In all cases, TBHEDI will have the sole right to determine the need for a system expansion or enhancement.

TBHEDI shall make every reasonable effort to respond promptly to a Customer's request for connection. TBHEDI shall respond to a Customer's written request for a Customer connection within fifteen (15) calendar days of receipt of the written request. TBHEDI will make an Estimate to Connect within sixty (60) calendar days of receipt of the written request, unless other necessary information is required from the Customer before the Estimate can be given. Requirements regarding the process and timing of embedded generation facility connections are set forth in the "Generator Information Package" available upon request.

TBHEDI shall make every reasonable effort to respond promptly to another distributor's request for connection. TBHEDI 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 Estimate to Connect the distributor to TBHEDI'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 Estimate can be made.

In addition to any other requirements in these Conditions of Service, the provision of new electrical service is conditional upon TBHEDI:

(a) being permitted and able to provide such supply;

(b) being able to obtain the necessary equipment, materials and labour to carry out the work;
(c) receiving the necessary easements or land rights to carry out the work;
(d) receiving all capital contribution and/or installation charge payments from the Customer; and
(e) verifying the approval of the Electrical Safety Authority.

Should TBHEDI not be permitted to provide new electrical service to the Customer, it is under no responsibility to the Customer whatsoever and the Customer releases TBHEDI from any liability in respect thereto.

Items that are applicable to a specific Customer class are covered in Section 3 of this Conditions of Service.

TBHEDI, in its discretion, may require a Customer, embedded generator or distributor to enter into a Connection Agreement with TBHEDI including terms and conditions in addition to those expressed in these Conditions of Service.

2.1.1 Building that "Lies Along"

TBHEDI will connect any building that "lies along" its distribution system when no expansion or enhancement of facilities is required (i.e., there is sufficient capacity to supply the new load). For the purposes of these Conditions of Service, "lies along" means a Customer property or premises that is directly adjacent to or abuts the road allowance where TBHEDI has distribution facilities.
Pursuant to the Distribution System Code, TBHEDI 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 TBHEDI's Distribution System without an Expansion or Enhancement; and
(b) the service installation meets the conditions listed in these Conditions of Service.

Connection Assets are the portion of the distribution system that is used to connect the Customer to TBHEDI's main distribution system.

Connection Assets are generally located on or about the Customer's property and include the following:

- Secondary underground cable
- Secondary duct banks up to the Customer's property line
- Distribution transformers
- Distribution transformer concrete pads
- Secondary terminations
- Primary terminations
- Transformer grounding
- Meter and associated transformation (CT / PT)

The determination of the Connection Assets will be on a case-by-case basis by TBHEDI.

All new or upgraded underground electrical services shall be installed within ducts on private property meeting TBHEDI Standards. For both primary and secondary services, TBHEDI will designate the supply point. Building lots created by subdivision and/or severance are required to be serviced with underground supply.

Where TBHEDI receives a request for service for a building that does not "lie along" its distribution system, an expansion or enhancement to TBHEDI's existing distribution system is required. TBHEDI will make an Estimate to Connect to the potential Customer in accordance with Section 2.1.2 below.

2.1.1.1 Connection Charges

TBHEDI shall recover costs associated with the installation of connection assets by Customer Class via Basic Connection Credit and Variable Connection Costs collected directly from the Customer, as applicable.

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 the Distribution System Code and below.

TBHEDI will recover this Variable Connection Cost, which will be based on actual cost, directly from the Customer.

The Basic Connection Credit consists of:

(a) a single estimate of the Connection Cost;
(b) supply and installation of standard overhead transformation capacity for a single residential service lot;
(c) supply and installation of a single-phase residential meter;
(d) connection of the secondary service at the described demarcation points; and
(e) the supply and installation of up to 30 m of #2 triplex overhead secondary conductor for up to and including a 200 A service, or an equivalent credit for underground conductor.

The Basic Connection Credit shall be applied towards the total cost to connect the Customer. Customers will be responsible for customer-specific connection costs beyond the defined Basic Connection Credit. These may include:

(a) the costs of TBHEDI supplied overhead and underground secondary cable;
(b) the costs of TBHEDI supplied primary conductor;
(c) costs associated with the supply and installation of overhead or underground transformation; and
(d) all other costs of connecting to TBHEDI’s distribution system.

Customers will be responsible for:

(a) the supply of tree and vegetation management on a Customer’s property;
(b) any easements or property agreements as required by TBHEDI;
(c) service upgrade charges; and

(d) the costs of any fees, permits, or other permissions required to connect the service.

2.1.2 Expansions / Offer to Connect

Expansion facilities are required to extend the distribution system to service a Customer or group of Customers which could not be otherwise supplied; for example by extending the length of the distribution system. Expansion facilities would include all upstream and capacity upgrades required to connect the Customer to TBHEDI's distribution system.

Expansion facilities not located on the Customer's property include:

- Terminations and fusing at the connection pole;
- Overhead conductor;
- Poles;
- Switches;
- Primary underground cable;
- Primary duct banks; and
- Switchgear and concrete pads.

All expansion facilities will be subject to an economic evaluation which will determine whether the Customer will receive a credit or will be required to pay a capital contribution to TBHEDI.

The determination of the Expansion Facilities will be determined on a case-by-case basis by TBHEDI.

When, in order to connect a Customer, TBHEDI must construct new distribution facilities or increase the capacity of existing distribution facilities, TBHEDI will perform an Economic Evaluation of the expansion project in accordance with the Distribution System Code.

The purpose of the Economic Evaluation is to determine if the future revenue from the Customer(s) will pay for the capital cost and on-going maintenance costs of the expansion project.

The Economic Evaluation methodology that TBHEDI shall use to calculate a Customer's capital contribution amount is set out in Appendix B of TBHEDI's Conditions of Service. The Customer's capital contribution will not exceed that Customer's share of the difference between:

(a) the present value of the capital costs and on-going maintenance costs for the equipment; and
(b) the present value of the projected revenue for distribution services provided by those facilities (There is no projected revenue from generators and distributors).

A capital contribution from the Customer will be required in the event that the present value of the estimated capital costs exceeds the present value of the forecasted revenues and on-going maintenance costs.

The results of the Economic Evaluation will be communicated to the Customer in the Estimate to Connect.

2.1.2.1 Transfer Price for Alternative Bid Work

The following work shall be eligible for Alternative Bids:

(a) the preliminary planning, design and engineering specifications of the work required for the distribution system expansion and connection (specifications shall be made in accordance with TBHEDI's design and technical standards and specifications);
(b) work involving any existing TBHEDI assets; and
(c) final connections to TBHEDI's distribution system.

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

2.1.2.2 Final Economic Evaluation & Capital Contribution Settlement

TBHEDI will carry out a final Economic Evaluation once the facilities are energized. The final Economic Evaluation will be based on forecasted revenues, on-going maintenance, actual costs incurred for the work not eligible for alternative bids, and the transfer price to be paid to the Customer for the alternative bid 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, TBHEDI will obtain from the Customer, or credit the Customer for, any difference between the two amounts.

TBHEDI 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

Where an expansion requires a capital contribution from the Customer, TBHEDI may require an expansion deposit for up to 100% of the present value of the forecasted revenues.

For expansions that do not require a capital contribution from the Customer, TBHEDI may require an expansion deposit for up to 100% of the present value of the projected capital costs and on-going maintenance costs of the expansion project.

When a Customer (regardless of its class) intends to exercise the alternative bid option, TBHEDI may require an expansion deposit in an amount equal to 10% of the cost of the alternative bid work as set out in the Estimate to Connect ("warranty portion of the expansion deposit"). TBHEDI will retain this portion of the expansion deposit for a

warranty period of two (2) 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 Customer Connection Horizon.

The Customer Connection Horizon for a project ends:

- For residential developments, upon the earlier of the materialization of all forecasted connections or five (5) years after energization of the new facilities, and
- For commercial and industrial developments, upon the earlier of the materialization of all forecasted demands or five (5) years after energization of the new facilities.

TBHEDI 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 1 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 TBHEDI and shall be provided prior to the commencement of any expansion work or the installation of any connection assets.

Exclusive of the warranty portion of the expansion deposit, TBHEDI shall annually, on the anniversary date of energization, perform a true-up of the Economic Evaluation based on actual load. This annual true-up will be performed during the Customer Connection Horizon (typically a five (5) year period).

However, if after the five (5) year Customer Connection Horizon the total number of connections (for residential developments) or the actual demand (for commercial and industrial developments) contemplated by the original Estimate to Connect have not materialized, TBHEDI 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 two (2) percent.

2.1.2.4 Capital Contributions from Unforecasted Customers and Rebates to Previous Capital Contributors

Unforecasted Customers that connect to the distribution system during the Customer connection horizon will benefit from the earlier expansion and should contribute their share. In such an event, the initial contributor shall then be entitled to a rebate from the distributor as follows:

(1) For a period of up to five (5) years, the initial contributor shall be entitled to a rebate without interest, based on apportioned benefit for the remaining period.
(2) The apportioned benefit shall be determined by considering such factors as the relative load level and the relative line length (in proportion to the line length being shared by both parties).

No rebates will occur after the five (5) year Customer Connection Horizon has expired.

2.1.3 Estimates to Connect

Under the terms of the Distribution System Code, TBHEDI is required to make an "Estimate to Connect" to any Customer that is in TBHEDI's service territory. TBHEDI will provide one (1) Estimate to Connect to the Customer for any plans submitted to TBHEDI for an expansion project, at no expense to the Customer. If the Customer submits revised plans, TBHEDI may provide a revised Estimate to Connect at the Customer's expense.

Based on the output of its economic evaluation, TBHEDI will set out in the Estimate to Connect, the following, as applicable:

(1) a description of the material and labour required to build the expansion to connect the Customer if a capital contribution is required from the Customer;
(2) a statement that the Estimate to Connect is an estimate of the costs and will be revised at the completion of the job to reflect actual costs;
(3) The amount of any "capital contribution" payable by the Customer in order to construct the expansion facilities (including all assumptions and inputs used in the economic evaluation);
(4) a description and estimate of the connection charges that would apply to connect the Customer (and whether such charges would be included in the capital contribution or not);
(5) whether the Estimate includes work for which the Customer may select the alternative bid option and, if so, the process;
(6) A cost breakdown (for both the alternative bid work and work not eligible for an alternative bid) into the following categories:
    (a) direct labour;
    (b) materials;
    (c) equipment; and
    (d) overheads (including administrative costs).
(7) 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"). These additional charges may include but are not limited to:

(a) costs for additional design, engineering, or installation of facilities required to complete the project;
(b) costs for inspection or approval of the work performed by the contractor hired by the Customer; and
(c) connection costs to TBHEDI distribution system.

(8) The amount of the Basic Customer Connection Credit; and
(9) The amount of any expansion deposit.

Revision of Estimate:

TBHEDI will revise the Economic Evaluation once the facilities are energized to take into account the actual costs of construction. If the Customer chooses the alternative bid option and transferred the facilities to TBHEDI, the initial Estimate shall be revised once the facilities are energized to take into account the actual costs associated with the expansion or enhancement facilities, including the transfer price and related inspection costs.

If the capital contribution amount resulting from the revised Economic Evaluation differs from the capital contribution amount resulting from the initial Estimate, TBHEDI will obtain from the Customer, or credit the Customer for, any difference between the two calculations.

2.1.3.1 Alternative Bids

If the Estimate to Connect demonstrates that:

(a) the project requires a capital contribution from the Customer; and
(b) the construction will not involve work on existing circuits;

TBHEDI will 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 Estimate to Connect as alternative bid work.

To qualify to undertake alternative bid work, contractors shall submit a "Construction Contractor Qualification Application" and meet the requirements posted at: http://www.tbhydro.on.ca/ no later than thirty (30) business days prior to their selection by the customer to undertake the alternative bid work.

In addition, TBHEDI 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 TBHEDI or not and shall have no liability to the Customer in respect of such work.

TBHEDI will also include in the Estimate to Connect or by separate document an estimate of any costs that will be incurred by TBHEDI in the event that the Customer decides to pursue an alternative bid for the work eligible for an alternative bid, 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 Estimate 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 TBHEDI distribution system.

Within sixty (60) days of receiving the Estimate to Connect, the Customer shall return a signed copy of the Estimate to Connect indicating acceptance of the Estimate, or, notify TBHEDI of its rejection of TBHEDI's Estimate 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 TBHEDI approved materials (i.e. same manufacturers and same part numbers). Once the Customer has hired a qualified contractor, the Customer must request and obtain from TBHEDI the listing of approved materials that may be required for the alternative bid work.

The Customer shall be responsible for:

(a) selecting, hiring, and paying the Qualified contractor for the costs for the work eligible for the alternative bid;
(b) assuming full responsibility for the construction of that aspect of the Expansion project;
(c) administering the contract including the acquisition of all required permissions, permits, and property rights as required;
(d) constructing the system expansion to meet TBHEDI's design requirements;
(e) paying an inspection fee to TBHEDI for inspection of the construction;
(f) paying the costs of any easements or property agreements as required by TBHEDI;
(g) transferring the ownership of the facilities built on public property or serving more than one Customer to TBHEDI prior to connection;
(h) paying costs for any additional design and engineering; and
(i) paying all applicable Electrical Safety Authority inspection fees.

TBHEDI shall be responsible for:

(a) providing the design specifications for the construction;
(b) inspecting and authorizing the expansion for connection; and
(c) connecting the expansion facilities to TBHEDI's distribution system.

2.1.4 Connection Denial

2.1.4.1 Buildings

TBHEDI is not obligated to connect a building within its service territory if the connection would result in any of the following:

(a) contravention of existing laws of Canada or the Province of Ontario including the Ontario Electrical Safety Code;

(b) violations of the conditions in TBHEDI Licenses, the Customer's Connection Agreement, or TBHEDI's Conditions of Service;
(c) materially adverse effect on the reliability and safety of the distribution system as determined by TBHEDI;
(d) a material decrease in the efficiency of TBHEDI's distribution system;
(e) a materially adverse effect on the quality of distribution services received by an existing connection;
(f) discriminatory access to distribution services;
(g) if the person requesting the connection owes TBHEDI money for distribution services, or for non-payment of a security deposit;
(h) public safety reasons or imposition of an unsafe work situation beyond normal risks inherent in the operation of the distribution system as determined by TBHEDI;
(i) where the electrical connection to TBHEDI's distribution system does not meet TBHEDI design requirements;
(j) violations of the property rights of property owners or other agencies, such as railways, Ministries, or the Municipality.

In addition to the above, TBHEDI may deny connection to any Customer for any of the following reasons:

(a) refusal by the Customer to sign any agreements required to be executed by the Customer under these Conditions of Service;
(b) failure to meet TBHEDI's security deposit policy requirements as outlined in these Conditions of Service.

If TBHEDI refuses to connect a Customer in its service area that lies along one of its distribution lines, TBHEDI shall inform the person requesting the connection of the reasons for the denial, and where TBHEDI is able to provide a remedy, make an Estimate to Connect. If TBHEDI is unable to provide a remedy to resolve the issue, it is the responsibility of the Customer to do so before a connection can be made.

2.1.4.2 Subdivisions

TBHEDI may refuse to connect a subdivision within its service territory for any of the following reasons:

(a) any of the items noted in Section 2.1.4.1 exist
(b) failure to pay the connection fees as specified in the subdivision agreement

2.1.4.3 Pole Attachments

TBHEDI is not obligated to connect or allow access to its poles within its service territory for any of the following reasons:

(a) any of the items noted in Section 2.1.4.1 exist;
(b) failure to enter into an agreement for the joint use of space on TBHEDI poles.

2.1.5 Customer Responsibilities

The location of the supply point, primary and secondary cables, transformer, and metering will be established through consultation with TBHEDI for both new and upgraded services. Failure to comply may result in the relocation of the service at the owner's expense.

The Customer shall construct and maintain all civil infrastructure (including, but not limited to, privately owned poles, underground ducts, cable chambers, cable pull rooms, transformer room/vault/pad) on private property that is deemed required by TBHEDI to accommodate its Connection Assets. All civil infrastructures are to be in accordance with TBHEDI's current standards, practices, specifications and these Conditions of Service, and are subject to TBHEDI's inspection and acceptance.

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.

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

It is the responsibility of the owner or their contractor to obtain underground cable and pipe locates from all Utilities before digging.

The Customer's service entrance and metering equipment shall meet TBHEDI' Standards and requirements. The Customer's cables shall be brought to a point determined by TBHEDI for connection to TBHEDI's supply.

If the installation is not in accordance with TBHEDI's specifications, the installation will be removed and re-installed at the Customer's expense.

It is the Customer's responsibility to maintain and repair the transformer room(s) or any other civil infrastructure that forms part or is part of the Customer's building.

TBHEDI will provide standard overhead or underground supply services to Customers. If a Customer requests special construction beyond the normal TBHEDI standard, the Customer shall pay the additional costs.

Where there are other services to be installed (e.g. gas, telephone, and cable) these shall be coordinated to avoid conflict with TBHEDI's underground cables.

2.1.6 Inspections before Connections

All Customer-owned and maintained electrical installations must be approved by the Electrical Safety Authority and must also meet TBHEDI's design standards and requirements. TBHEDI requires notification from the Electrical Safety Authority that the installation has passed inspection prior to energizing a Customer's supply of electricity. Services that have been disconnected for the purposes of upgrade or change, or

services that have been altered subsequent to Electrical Safety Authority approval must be re-inspected and approved by the Electrical Safety Authority prior to reconnecting.

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 at the Customer's expense should the period of use be allowed to exceed twelve (12) months.

Customer-owned substations must be inspected by both the Electrical Safety Authority and TBHEDI.

Customer transformer vaults shall be inspected and approved by TBHEDI prior to the installation of TBHEDI's equipment.

All Customer-owned civil work must be inspected and approved by TBHEDI prior to the installation of TBHEDI equipment.

All ducts, duct banks, trenches, transformer pads, and grounding shall be inspected and approved by TBHEDI prior to the pouring of concrete and again before backfilling. In the event of blocked ducts, the owner will be responsible for clearing or replacing the ducts, prior to cable installation. Connections made to existing concrete duct banks or cable chambers shall be done only by a contractor approved by TBHEDI. All work done on existing TBHEDI plant must be authorized by TBHEDI and carried out in accordance with all applicable safety legislation and requirements.

As per the Ontario Energy Board, up to five normal working days are necessary for TBHEDI to energize new or enlarged low voltage electrical services from the receipt of written approval by the Electrical Safety Authority provided that all TBHEDI conditions are satisfied. As per Ontario Energy Board, up to ten working days are necessary for TBHEDI to energize new or enlarged high voltage electrical services from the receipt of written approval by the Electrical Safety Authority provided that all TBHEDI conditions are satisfied. During extremely busy periods TBHEDI may be required to energize the service after normal business hours due to previously scheduled commitments and limited resources.

Metering shall be completely inspected and approved by TBHEDI prior to energization.

Where the Conditions of Service are not complied with prior to inspection and approval, the Customer is responsible for the cost of any and all damages to TBHEDI's distribution system and any associated costs incurred by TBHEDI in order to address the Customer's non-compliance with these Conditions of Service. The Customer's service shall be disconnected immediately until these conditions are satisfied.

2.1.7 Relocation of Plant

When requested to relocate distribution plant, TBHEDI will exercise its rights and discharge its obligations in accordance with existing acts, by-laws and regulations including the *Public Service Works on Highways Act*, formal agreements, easements and law.

In the absence of existing agreements, TBHEDI is not obligated to relocate the plant. However, TBHEDI shall resolve the issue in a fair and reasonable manner. Resolution in a fair and reasonable manner will include a response to the requesting party that explains the feasibility or unfeasibility of the relocation and a fair and reasonable charge for relocation based on cost recovery principles.

Feasibility considerations may include, but may not be limited to, technical considerations and availability of alternate locations.

In the course of maintaining and enhancing TBHEDI's distribution plant, TBHEDI may need to relocate distribution plant that is owned by TBHEDI. Where a Customer requests that such maintenance or construction activities be done outside TBHEDI's normal working hours, the Customer shall pay for any incremental costs incurred by TBHEDI as a result thereof.

2.1.8 Easements

The Customer shall, at no cost to TBHEDI, grant where required an easement to permit installation and maintenance of service. The width, extent and terms of this easement shall be determined by TBHEDI. The easement must be granted prior to energization of the service.

To maintain the reliability, integrity and efficiency of the distribution system, TBHEDI has the right to have supply facilities on private property and to have easements registered against title to the property.

Easements are required where TBHEDI facilities are to be located on private property, or crosses over the property of a third party to serve property other than property where the facilities are located and/or where TBHEDI deems it necessary.

The Customer will prepare at its own cost, any required reference plan and associated easement documents to the satisfaction of TBHEDI prior to its registration and registering of the easement plan. Four (4) copies of the deposited reference plan must be supplied to TBHEDI prior to the preparation of the easement documents. Details will be provided upon application for service. The Customer is responsible for registering both the reference plan and the easement documents.

2.1.9 Contracts

2.1.9.1 Contract for New or Modified Electricity Service

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

- a completed and signed application for service (see Appendix C for Terms and Conditions);
- payment to TBHEDI of any applicable connection charge;
- payment of any security deposit as outlined in Section 2.4.3; and
- an inspection and approval by the Electrical Safety Authority of the electrical equipment for the new or upgraded service

TBHEDI may also require the Customer to enter into a Connection Agreement acceptable to TBHEDI as noted in Section 2.1.9.4 in these Conditions of Service.

Customers, who require a MIST (interval) metering installation, must sign an Interval Metering Agreement.

2.1.9.2 Implied Contract

In all cases, notwithstanding the absence of a formal contract, TBHEDI has an implied contract with any Customer or consumer that is connected to TBHEDI's distribution system and receives distribution services. The terms of the implied contract are embedded in TBHEDI's Conditions of Service, the OEB Rate Handbook, TBHEDI's rate schedules, the Distribution System Code, TBHEDI's Distribution License, the Standard Supply Service (SSS) Code, and the Retail Settlement Code, all as amended from time to time.

The acceptance of supply of electricity or related services from TBHEDI constitutes a binding contract with TBHEDI, which includes these Conditions and all terms thereunder. Any person accepting the supply of electricity or related services shall be liable for payment for same, and such implied contract shall be binding upon the heirs, administrators, executors, successors or assigns.

2.1.9.3 Non-Standard Contracts

Non-standard 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
- Operating and maintenance
- Non-permanent structures
- Special occasions, etc.
- Generation

The requirement for Non-Standard Contracts will be determined by TBHEDI on a case by case basis.

2.1.9.4 Connection Agreements

TBHEDI may require a Customer to enter into a Connection Agreement in a form that is both consistent with the Distribution System Code and acceptable to TBHEDI. The type of Connection Agreement will vary, depending upon the nature of the Customer, as follows:

- Micro-Embedded Generator Connection Agreement: TBHEDI utilizes the connection agreement for micro-embedded generators set out in Appendix E of the Distribution System Code. In the event that a micro-embedded generator connected to TBHEDI has not signed such a connection agreement, the micro-embedded generator Customer shall be deemed to have accepted and agreed to

be bound by all of the terms in the Micro-Embedded Generator Connection Agreement in Appendix E of the Distribution System Code.

- Small and Mid-Sized Embedded Generator Connection Agreement: TBHEDI utilizes the form of connection agreement for small and medium-sized generators set out in Appendix E of the Distribution System Code. In the event that a small or medium-sized embedded generator connected to TBHEDI has not signed such a connection agreement, the small or medium-sized generator Customer shall be deemed to have accepted and agreed to be bound by all of the terms in the Form of Connection Agreement For Small or Medium-Sized Generators in Appendix E of the Distribution System Code.
- Large Embedded Generator Connection Agreement: TBHEDI will enter into a customer-specific connection agreement with large embedded generators. Some of the information contained in such a connection agreement can be found in Appendix E of the Distribution System Code.
- Connection Agreement with Another Distributor: TBHEDI will enter into a customer-specific connection agreement with other distributors.
- Connection Agreement with all other Customers: For Customers who are not embedded generators or other distributors, TBHEDI may enter into a Connection Agreement. In the event that the Customer has not entered into a Connection Agreement with TBHEDI, the Customer will be deemed to have accepted and agreed to be bound by the Terms of Agreement for Electrical Service set out at Appendix C to these Conditions of Service.

2.1.10 Temporary Service

A temporary service is a metered service provided to facilitate various applications; including but not limited to uses such as construction projects, outdoor shows, gatherings, and special events. Temporary services may be provided for a period of less than 12 months. Temporary services may be renewed thereafter at the discretion of TBHEDI. If an extension is required then the equipment for such temporary service must be re-inspected prior to the extension. At the discretion of TBHEDI, one or more temporary services may be provided for a site.

Temporary services can be supplied overhead or underground. The location of the Service Entrance point and metering details will be established through consultation with TBHEDI. Failure to comply may result in modifications at the owner’s expense.

All installations that are built by the Customer will be built in accordance with the Electrical Safety Code and approved by the ESA.

Subject to the requirements of TBHEDI, supply will be connected after receipt of an "Authorization to Connect" from the ESA, a signed contract and a deposit as outlined in Section 2.4.3 from the Customer.

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 TBHEDI’s point of supply.

The Customer will be responsible for all associated costs for the installation and removal of equipment required for a temporary service to TBHEDI's point of supply. The Customer will pay for the temporary installation and removal based on TBHEDI's estimated costs of such installation and removal prior to the commencement of any work being initiated by TBHEDI.

There will be a minimum charge to all temporary services. This charge is based on 30 m of conductor and connection to the electrical distribution system.

Connection assets above and beyond the above standard allowance will be recovered based on actual costs. Where the Customer has paid Thunder Bay for the temporary installation and removal on the basis of an estimate of such costs, and the actual costs are higher than the estimate, the Customer shall pay TBHEDI the balance of its actual costs for the installation and removal failing which, TBHEDI will apply any outstanding amount against the Customer's temporary deposit.

The cost of any transformation may be charged to the Customer as part of the actual costs prior to energization. As appropriate, upon removal, the Customer will be credited the cost of the transformer, as long as it is in working order. The Customer is responsible for the transformer, if any damage whatsoever occurs. The Customer will retain ownership of the transformer and the cost will not be credited to the Variable Connection Charge.

All construction that occurs on private property will be the responsibility of the Customer.

Any modifications or changes to the above will be at the discretion of TBHEDI.

2.1.10.1 Metering

The owner will make provisions acceptable to TBHEDI for revenue metering equipment. The provisions for metering could be one or a combination of the following, as established by TBHEDI:

- approved meter sockets as indicated in Appendix F;
- a lockable enclosure as outlined in Appendix F; or
- for all three-phase outdoor services, the meter must be installed in a weatherproof, lockable enclosure.

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

The metering equipment location will be agreed upon through consultation with TBHEDI. The location allocated for TBHEDI metering equipment shall be directly accessible to TBHEDI staff, and shall be subject to satisfactory environmental conditions, some of which are:

- safe and adequate working space with not less than 1.2 m in front of the metering equipment;
- protection against the adverse effects of moving machinery, vibration, dust, moisture or fumes.

Prior to energization, TBHEDI will require notification of approval by the Electrical Safety Authority. The Service Entrance and metering provision shall be inspected and accepted by TBHEDI prior to energization.

2.1.11 Subdivisions

Developers of Subdivisions are required to enter into a Subdivision Agreement with the City of Thunder Bay and a Subdivision Connection Agreement with TBHEDI available upon request.

In case of conflict between the Subdivision Connection Agreement and the terms herein, the Subdivision Connection Agreement shall be binding. All design work, including service locations and trench routes, must be approved by TBHEDI.

Residential Subdivision developments shall be treated as a system expansion for the Expansion Facilities as defined in these Conditions and shall be subject to Section 2.1.2 Expansions and Enhancements. Connection Assets installed to service each individual lot connection shall individually be subject to Section 2.1.1. Each individual lot connection qualifies for the Basic Connection Credit which will be apportioned to the Developer and/or Customer according to the proportion of total connection charges assumed by each party.

All of the electrical service must be constructed to TBHEDI's standards and in compliance with the Ontario Electrical Safety Code, applicable laws, regulations and codes.

2.2 Disconnection

TBHEDI shall not be liable for any damages or claims as a result of disconnection of service.

TBHEDI reserves the right to disconnect the supply of electricity to a Customer for causes including, but not limited to, the following:

- Failure to pay TBHEDI any amounts due and payable for the distribution of electricity or for the supply of electricity under Section 29 of the *Electricity Act*;
    - Non-payment of security deposit requirements in accordance with TBHEDI's security deposit policy;
    - Contravention of the laws of Canada or the Province of Ontario, including the Ontario Electrical Safety Code.
    - Adverse effects on the reliability and safety of TBHEDI's distribution system;
    - Imposition of an unsafe worker situation beyond normal risks inherent in the operation of TBHEDI's distribution system;
    - A material decrease in the efficiency of TBHEDI's distribution system;
    - Electrical disturbance propagation caused by the Occupant's equipment that is not corrected in a timely fashion;
    - A materially adverse effect on the quality of distribution services received by an existing connection;
    - Discriminatory access to distribution services;

- Inability of TBHEDI to perform planned inspections and maintenance or access to the meter;
- Failure of the Customer to comply with a directive that TBHEDI has made for the purposes of meeting its Distribution License obligations;
- Failure of the Customer to comply with any requirement in these Conditions of Service or a term of any agreement made between the Customer and TBHEDI including, but not limited to, a Connection Agreement;
- In compliance with a court order;
- By order of the Electrical Safety Authority;
- By order of the IESO; or
- Any other conditions identified in this Conditions of Service document.

In all circumstances where allowable by law, an attempt shall be made to notify the Customer in advance of the disconnection.

TBHEDI may disconnect the supply of electricity without notice in accordance with a court order, or for emergency, safety or system reliability reasons or to inspect, maintain, repair, alter, remove, replace, or disconnect wires or other facilities used to distribute electricity.

Further, notwithstanding Section 2.1.9.2 (Implied Contract), TBHEDI shall be entitled to disconnect the supply of electricity to a building or property where the building or property has been using power for unlawful purposes, including energy diversion and theft of power. The supply of electricity to the building or property may not be reconnected until TBHEDI receives full payment for all reasonable costs and losses incurred by TBHEDI arising from the unauthorized energy use (including inspection costs, repair costs, commodity costs, etc.).

Under any of the following circumstances, TBHEDI requires the Customer to obtain the approval of the Electrical Safety Authority prior to TBHEDI reconnecting the service:

- where TBHEDI has reason to believe that the wiring may have been damaged or altered;
- where service was disconnected for modification of Customer wiring;
- where the service has been disconnected for a period of six months or longer;
- where the service was disconnected as a result of an adverse effect on the reliability and system of TBHEDI's distribution system; or
- where it is a requirement of the Ontario Electrical Safety Code.

2.2.1 Disconnection for Non-Payment of Overdue Accounts

Regular hydro bills, including any applicable security deposits are due sixteen (16) days after bill issue date. If a bill remains unpaid, a disconnection notice will be sent twenty-six (26) days from bill issue date for any outstanding balance.

Under section 2.7 of the DSC, Thunder Bay Hydro will apply any security deposit held on account of a residential Customer against any electricity charges owing at the time. Thunder Bay Hydro will attempt to contact the Customer via phone and/or mail to facilitate payment arrangements.

If attempted contact with the Customer has failed, and/or satisfactory payment arrangements have not been made, Thunder Bay Hydro will arrange for the disconnection of electricity supply only as a last resort. During winter months, a current limiting device may be used in place of a disconnection.

Thunder Bay Hydro shall make reasonable efforts to contact by telephone, or in person by hand delivered notice, any customer where a disconnection is scheduled for non-payment at least 48-hours prior to the scheduled date of disconnection.

At that time, Thunder Bay Hydro will:

(a) advise the Customer of the scheduled date for disconnection;
(b) advise the Customer that a disconnection may take place whether or not the Customer is at the premises;
(c) where applicable, advise the Customer that the disconnection may occur without attendance at the Customer's premises;
(d) advise that the Customer has the option to pay amounts owing by credit card issued by a financial institution, in addition to other forms of payment that the distributor will accept at that time and which can be verified within the time period remaining before disconnection; and advise during what hours such payments may be made;
(e) advise the Customer that a Board-prescribed arrears management program may be available to the Customer.

Per Sections 4.2.1.1 and 4.2.1.2 of the Distribution Settlement Code, a copy of the "Fire Safety Notice" of the Office of the Fire Marshall, will be delivered prior to, or at the time of disconnection for nonpayment.

Thunder Bay Hydro shall not be liable for any injury, loss or damage to persons or property accruing or resulting from the failure of supply of electricity due to nonpayment of account.

Thunder Bay Hydro may recover from the disconnected customer the reasonable costs associated with disconnection. Further, discontinuance of service does not relieve the Customer of the liability for arrears. Reconnection of the account shall be completed only after the Customer has made satisfactory payment arrangements. All such reconnections shall be subject to a reconnection charge by Thunder Bay Hydro.

2.3 Conveyance of Electricity

2.3.1 Limitations on the Guaranty of Supply

TBHEDI agrees to use reasonable diligence to provide a regular and uninterrupted supply of electricity but does not guarantee constant supply or the maintenance of invariable frequency or voltage and will not be liable for damages occasioned by the failure to provide such services to the Customer.

It may be necessary to interrupt a Customer's supply to maintain or improve the TBHEDI distribution system, or to provide new or upgraded services to other Customers. Whenever practical and cost effective, as determined by TBHEDI, arrangements suitable to the Customer and TBHEDI will be made to minimize any inconvenience.

Customers should expect to have one planned power outage per year for TBHEDI to perform system maintenance and/or enhancements. It is TBHEDI's policy to attempt to limit planned outages to its Customers to one per year. Customers may experience unplanned outages over and above any planned outages.

Except in cases of extreme emergency involving danger to life and limb or impending severe equipment damage, or due to practical considerations, TBHEDI will endeavor to provide the Customer with reasonable advance notice of power interruptions.

Customers requiring a higher degree of security, than that of normal electrical supply, are responsible to provide their own back-up or standby facilities as well as any special protective devices required at their premises to minimize the effects of momentary power interruptions.

Customers requiring a three-phase service 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 TBHEDI's electricity supply.

TBHEDI or its agents shall have rights to access a property to operate and/or maintain its facilities in accordance with section 40 of the *Electricity Act, 1998* and any successor acts thereto.

TBHEDI will use reasonable efforts to exercise this power of entry during normal business hours. The TBHEDI employee or authorized agents exercising this power of entry will identify themselves with proper identification upon request.

During an emergency, TBHEDI may interrupt electrical supply to its Customers in response to a shortage of supply of electricity, to affect repairs on its distribution system, to perform other operations as deemed necessary by TBHEDI, or while repairs are being made to Customer owned equipment.

To assist with distribution system outages or emergency response, TBHEDI may require a Customer to provide TBHEDI with emergency access to Customer-owned distribution equipment or TBHEDI-owned equipment on Customer's property.

2.3.2 Power Quality

Upon request for an appointment, TBHEDI will provide no charge voltage checks at a Customer secondary service entrance only. Other voltage checks beyond the service entrance point will be the responsibility of the Customer, except for TBHEDI owned equipment.

2.3.2.1 Power Quality Investigations

TBHEDI will respond to Customer power quality concerns and investigate the condition of supply at the service entrance. There is no fee for such initial investigation during business hours. Upon completion of the initial investigation, TBHEDI shall report the results to the Customer.

If the cause is deemed to be the result of the Customer's service, the Customer will be responsible to rectify the condition. TBHEDI will provide an option to the Customer to

proceed with the investigation and correction of the service condition at the expense of the Customer. Further, if the power quality problem is found to be caused by the Customer making the complaint, TBHEDI may seek reimbursement for the initial investigation of the complaint.

If the cause of the power quality problem is deemed to be TBHEDI's power supply, TBHEDI will proceed to rectify the condition.

To determine the parameters of adequate power quality and whether the Customer's concerns are reasonable for local distribution systems, TBHEDI will use appropriate industry standards (such as IEC, IEEE, CAN3-C235-87) and established good utility practice guidelines.

2.3.2.2 Power Quality Customer Obligations

It is the responsibility of the Customer to ensure that electrical service usage does not cause disturbance on the distribution system.

Specifically:

(1) Large non-linear loads must be equipped with proper corrective measures, such as filtering and/or grounding techniques. 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) Motor starting current shall not exceed their associated supply circuit limitations or cause voltage levels at the supply point to go outside the acceptable limits in Section 2.3.5. Reduced voltage starting may be required if satisfactory transformer fusing cannot be obtained due to excessive starting current or a relatively long starting cycle. It should be noted that objectionable voltage flicker on the Customer's secondary system may be experienced if the motor(s) are supplied from a transformer bank which also supplies lighting or other sensitive equipment in the building.

(3) Three-phase Customers shall ensure their load is balanced between the three phases within 15% of each phase, unless specific unbalancing is approved by TBHEDI.

(4) With respect to older services with ground fault detection for three-phase, 3-wire delta services: ground fault detection (phase indication lights) is required on the load-side of the revenue metering for each individual service, and if more than one individual meter is required off a splitter trough, then ground fault detection (phase indication lights) is required on the load-side of each revenue meter. In case of bulk metering, ground fault detection would be required on the load-side of the bulk metering.

Customers are obligated to assist TBHEDI with power quality investigations by providing the required equipment information, relevant data and necessary access for the installation of monitoring equipment.

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

(a) Maintaining and providing TBHEDI 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 TBHEDI 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.

If TBHEDI determines the Customer's equipment to be the source of unacceptable power quality on TBHEDI's distribution system, the Customer will be required to cease operation of the equipment until the problem is rectified at the sole expense of the Customer. If the Customer does not comply with the efforts of TBHEDI to remedy the situation within a reasonable time, TBHEDI may disconnect the Customer in accordance with the disconnection provisions of these Conditions of Service.

Any Customer condition that adversely affects the TBHEDI distribution system must be corrected immediately by the Customer, at the Customer's sole expense, if directed to do so by TBHEDI. Such adverse effects include, but are not limited to, direct hazards to the public, or adversely affecting the reliability of the TBHEDI distribution system.

2.3.2.3 Notifications for Power Interruptions

Although it is TBHEDI's policy to minimize inconvenience to Customers, it is necessary to occasionally interrupt a Customer's supply of electricity to allow work on TBHEDI's electrical system. All customers should expect one outage per year for maintenance or system enhancement. TBHEDI will endeavor to provide Customers with reasonable notice of planned power interruptions; however, interruption times may change due to inclement weather or other unforeseen circumstances. TBHEDI shall not be liable in any manner to such Customers for failure to provide such notice of planned power interruptions or for any change to the schedule for planned power interruptions.

During an emergency, TBHEDI may interrupt supply of electricity to a property without notice in response to a shortage of supply of electricity or to effect repairs on TBHEDI'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.

2.3.2.4 Emergency Trouble Calls

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

When power is interrupted or otherwise adversely affected, the Customer should first confirm that the problem is not due to open fuses, breakers, or disconnect devices on their equipment. If there is a partial power failure, the Customer should obtain the services of an electrical contractor to carry out the necessary repairs. If upon

investigation, it appears that TBHEDI's main source of supply has failed, the Customer should report these conditions at once to TBHEDI's Trouble Call Line at (807) 343-1002 or the general number at (807) 343-1111.

TBHEDI operates a System Control Centre 24 hours a day to provide emergency services to Customers. TBHEDI will initiate restoration efforts as expediently as practicable.

2.3.3 Electrical Disturbances

TBHEDI shall not be held liable for the failure to maintain supply voltages within standard levels due to Force Majeure as defined in the Glossary of these Conditions.

Voltage fluctuations and other disturbances can cause flickering of lights and other serious difficulties for Customers connected to TBHEDI's distribution system. It is the Customer's responsibility to ensure that their equipment does not cause undesirable system disturbances, which may be reflected back to TBHEDI's circuits, such as harmonic distortions, and spikes that might interfere with or adversely affect the operation of adjacent Customer equipment. Equipment that may cause these disturbances includes large motors, welders, and variable speed drives, electronic power converters, etc. The Customer must notify TBHEDI in advance of installation of such equipment to ascertain if the installation of such equipment is permissible and to what extent additional facilities may be required to prevent disturbance to the TBHEDI distribution system.

Customers 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

2.3.4.1 Primary Voltage

The primary voltage to be used will be determined by TBHEDI for both TBHEDI-owned and Customer-owned transformation. Depending on the voltage of the building that "lies along", the supplied primary voltage will be at 24/13.8 kV grounded wye, three-phase, 4-wire system for urban and 12/7.2 kV grounded wye, three-phase, 4-wire system in the rural. Where 4.16/2.4kV grounded wye, three-phase, 4-wire exists, connections to the 4kV system will be allowed on a case by case basis where other options are limited since the use of the 4kV system is not being expanded, and will ultimately be phased out.

2.3.4.2 Supply Voltage

Depending on the type of distribution plant that "lies along," the supplied secondary voltage shall be:

(a) 120/240 V , single-phase, 3-wire;
(b) 120/208Y V , three-phase, 4-wire; or
(c) 347/600Y V , three-phase, 4-wire.

The following primary services may be made available:

(a) 13,800/24,000 Y V;
(b) 7200/12,470 Y V; or
(c) 2400/4,160 Y V (determined on a case by case basis).

Although TBHEDI can provide the above voltages, they are not always available from the portion of the distribution system that the building "lies along". The Customer must check with TBHEDI to find out whether or not a particular voltage is available at any particular site. It may be necessary to expand or enhance the distribution system in order to provide the requested voltage. If an expansion or enhancement is required, the Customer may be required to provide a capital contribution in accordance with Section 2.1.2.

2.3.5 Voltage Guidelines

The following Extreme Operating Conditions are the conditions under which TBHEDI will contract to supply electrical energy. TBHEDI attempts to maintain service voltage at the service entrance of the Customer within the guidelines of CSA Standard CAN3-C235-83 (or latest edition), which allows variations from nominal voltage as shown in the chart below:

Voltage Variation Limits
Applicable at Service Entrances

Nominal System Voltages	Extreme Operating Conditions	Normal Operating Conditions		
Single-Phase				
120/240	104/208	108/216	125/250	127/254
240	208	216	250	254
600 (*)	520	540	625	635
Three-Phase (4 Conductor)				
120/208Y	108/187	110/190	125/216	127/220
240/416Y (*)	216/374	220/380	250/432	254/440
347/600Y	300/520	312/540	360/625	367/635

(*) no longer a standard voltage offered by TBHEDI.

TBHEDI 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. TBHEDI shall not be liable for any failure or delay in performing its obligations under these conditions due to a "Force Majeure" event.

When voltages lie outside the acceptable limits for Normal Operating Conditions, but within the indicated limits for Extreme Operating Conditions, improvement or corrective action will be taken on a planned and programmed basis, but not necessarily on an emergency basis. When voltages lie outside the acceptable limits for Extreme Operating Conditions, improvement or corrective action should be taken on a priority basis.

Upon request for an appointment, TBHEDI will provide voltage checks at no charge, at a Customer secondary service entrance only. Other voltage checks beyond the service entrance point will be the responsibility of the Customer, except for TBHEDI equipment.

2.3.6 Emergency Back-up Generation Facilities

Customers with 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. Customers with permanently connected emergency generation equipment must notify TBHEDI.

In particular, the Customer must ensure that their backup generation facility does not parallel with TBHEDI's system without a proper interface protection and a Generator Connection Agreement, as required by TBHEDI, and does not adversely affect TBHEDI's distribution system. Where a Customer's portable or permanently connected generator causes damage to TBHEDI's electrical distribution system, the Customer is responsible for the cost of all repairs to the electrical distribution system as a result of their connection.

2.3.7 Metering

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

Any generator connected to the TBHEDI distribution system shall install a meter in accordance with the Ontario Energy Board and Independent Electricity System Operator requirements. The Customer shall obtain a written approval from TBHEDI with respect to technical details of the metering installation.

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, TBHEDI 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 TBHEDI. TBHEDI 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 System Operator ("IESO") administered wholesale market must meet or exceed all IESO metering requirements.

All Embedded Generation Facilities of 10MW or larger must meet or exceed all IESO metering requirements.

TBHEDI will typically install metering equipment at the Customer supply voltage. The Customer must provide a convenient and safe location satisfactory to TBHEDI, reserved solely for metering equipment, with direct outside access acceptable to TBHEDI with a locking mechanism in conformity with Section 3.3.7 and the Electrical Safety Authority, for the installation of TBHEDI revenue metering equipment, meters, wires and ancillary equipment, free of charge or rent. Customers will allow only a properly identified employee or authorized agent of TBHEDI to read, remove, inspect, connect, replace, adjust, or repair TBHEDI metering, service entrance equipment, communications equipment, or other plant located on the Customer's premises.

The Customer will allow TBHEDI employees and agents free and unrestricted access, at all reasonable hours, to TBHEDI meters, wires and other equipment. Where safety or reliability of the electrical distribution system is at risk, free and unrestricted access will be required at all times.

The Customer will be responsible for the care and safekeeping of TBHEDI meters, wires and ancillary equipment on the Customer's premises. If any TBHEDI 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 TBHEDI the value of such equipment, or at the option of TBHEDI, the cost of repairing the same.

The location allocated by the owner for TBHEDI metering shall provide direct access for TBHEDI 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 m (48") and a minimum ceiling height of 2.1 m (84"); and
- 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 TBHEDI deems self-contained meters to be in a hazardous location, the Customer shall provide a meter cabinet or protective housing in accordance with these Conditions of Service.

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

Each unit in all new multi-unit sites including apartment buildings, condominiums and malls shall be individually metered. Developers will contact TBHEDI for details of metering requirements for multi-unit sites prior to submission of drawings to TBHEDI. Each unit in all new multi-unit sites shall be metered in accordance with Section 3.3.6.

Residential type townhouses will be individually metered.

Bulk metered buildings may be converted to individually metered interval metered units at the Customer's cost.

2.3.7.1 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 located indoors.

When the Customer is required to supply and install a TBHEDI approved meter socket for the use of TBHEDI's self-contained socket meters, the main switch ratings and supply voltages listed in Appendix F appended to these Conditions of Service apply.

When the Customer is required to supply and install a meter cabinet to contain TBHEDI's metering equipment, the main switch ratings and supply voltages listed in Appendix F appended to these Conditions apply.

Meter centers installed for individual metering applications must meet the requirements specified in Appendix F appended to these 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. TBHEDI shall not be liable for any loss or damage resulting from the incorrect identification of services or equipment.

2.3.7.2 Service Main Limitations

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

2.3.7.3 Special Enclosures

Specially constructed meter entrance enclosures may be permitted for outdoor use upon TBHEDI's approval of a written application for use.

2.3.7.4 Meter Loops

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 TBHEDI prior to installation. Where more than two conductors per phase are used, the connectors shall be provided by the Customer. 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 TBHEDI prior to installation.

2.3.7.5 Barriers

Barriers are required in each section of switchgear or service entrance equipment between metered and un-metered conductors and/or between sections reserved for TBHEDI use and sections for Customer use.

2.3.7.6 Doors

Side-hinged doors shall be installed over all live electrical equipment where TBHEDI 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°.

2.3.7.7 Auxiliary Connections

All connections to circuits such as fire alarms, exit lights and Customer instrumentation shall be made to the load-side of TBHEDI's metering.

No Customer equipment shall be connected to any part of the TBHEDI metering circuit.

2.3.7.8 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.

2.3.7.9 Instrument Transformer Compartments

Where instrument transformers are incorporated in low voltage switchgear, the chamber size and number of instrument transformers shall be as shown in Appendix F of these Conditions. A separate **meter base** must be supplied and installed by the Customer, located to the satisfaction of TBHEDI and as close as possible to the instrument transformer compartment. See TBHEDI Engineering for specific metering requirements.

The meter base and compartment will be located in the same electrical room and connected by an empty 30 mm conduit. The length of this conduit shall not exceed 5 m, and shall include a maximum of three 90^{o} bends. The conduit will be provided for the exclusive use of TBHEDI. Fittings with removable covers are permitted only if designed to be sealed.

The meter base shall be grounded by a minimum #6 copper grounding conductor, not installed in the above conduit. The Customer shall install a strong nylon or poly-rope 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 TBHEDI 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); TBHEDI will issue specific metering requirements.

2.3.7.10 Interval Metering

Interval meters will be installed for all new or upgraded services where the peak demand is forecast to be 500 kW or greater. Prior to the installation of an interval meter, the Customer must provide a 30mm conduit from its telephone room to the meter cabinet. The Customer will arrange for the installation of a telephone line, terminated in the meter cabinet for the exclusive use of TBHEDI to retrieve interval meter data. The Customer will be responsible for the installation and ongoing monthly costs of operating the phone line. If the telephone line is not installed prior to service being energized, the Customer will pay TBHEDI to manually read the meter on overtime at the Customers expense. The phone line will be direct dial, voice quality, active 24 hours per day, and activated prior to meter installation.

Other Customers wishing to participate in the spot market pass-through pricing or that request interval metering shall compensate TBHEDI 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 re-verification 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.

2.3.7.11 Meter Reading

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

Where TBHEDI is unable to obtain a meter reading, the Customer’s bill shall be estimated based on the consumption from the same period of the previous year.

2.3.7.12 Final Meter Reading

When a service is no longer required, the Customer shall provide five (5) working days’ notice of the date the service is to be discontinued so that TBHEDI can obtain a final meter reading. The Customer shall provide access to TBHEDI or its agents for this purpose. If a final meter reading is not obtained, the Customer shall pay a sum based on an estimated demand and/or energy for electricity used since the last meter reading, as determined by TBHEDI.

2.3.7.13 Inaccurate Energy Registration

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. TBHEDI'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, TBHEDI will determine the correction factors based on the specific cause of the metering error and the Customer's electricity usage history. The Customer 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 TBHEDI, 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 Customer was overcharged, TBHEDI will reimburse the Customer 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. TBHEDI will correct the bills for that period in accordance with the regulations under the *Electricity and Gas Inspection Act.*

2.3.7.14 Meter Dispute Resolution

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

Either TBHEDI or the Customer may request the service of Measurement Canada to resolve a dispute. If the Customer initiates the dispute, TBHEDI will charge the Customer a meter dispute fee if the meter is found to be accurate and Measurement Canada rules in favor of the utility. Further, the disputed meter will be re-installed at the Customer's service location.

2.4 Tariffs and Charges

2.4.1 Service Connection

Charges for distribution services are made as set out in TBHEDI's Tariff of Rates and Charges ("Rate Schedule"), available upon request from TBHEDI or as posted on its website at http://www.tbhydro.on.ca. Notice of rate revisions will be published in major local newspapers or via bill inserts or otherwise directed by the OEB.

2.4.1.1 Customers Switching to Retailers

There are no physical service connection differences between Standard Supply Service (SSS) customers and third party retailer customers. The supply of electricity to both types of customers is delivered through the distribution system of TBHEDI with the same distribution requirements. Therefore, all service connection requirements applicable to the SSS customers are applicable to a third party retailers' Customers.

2.4.1.2 Supply Deposits and Agreements

Where an owner proposes the development of premises that require TBHEDI to place orders for equipment for a specific project and before actual construction begins the

owner is required to sign the Estimate to Connect and furnish a suitable deposit before such equipment is ordered by TBHEDI.

2.4.2 Energy Supply

Customers may purchase their supply of electricity under contract from an electricity retailer or from TBHEDI under SSS. TBHEDI will supply and deliver electricity to all connected Customers according to its current Rate Schedule.

2.4.2.1 Standard Supply Service (SSS)

TBHEDI's existing SSS Customers are Customers until TBHEDI is informed by the Customer or the authorized retailer of the Customer of their switch to a competitive electricity supplier. The Service Transfer Request ("STR") must be made by the Customer or the Customer's authorized retailer.
For SSS Customers the price electricity is charged to consumers on a pass-through basis. Customers will pay a price based on the weighted average hourly spot market price of electricity. This price may be subject to such rebates or adjustments as may be required by law.

2.4.2.2 Retailer Supply

Customers transferring from SSS to a retailer shall comply with the STR requirements as outlined in Sections 10.5 through 10.5.6 of the Retail Settlement Code. All requests shall be submitted as an electronic file and transmitted through EBT Express. STR shall contain information as set out in Section 10.3 of the Retail Settlement Code.

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

2.4.2.3 Wheeling of Energy

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

2.4.3 Security Deposits

All Customers must meet TBHEDI's Security Deposit Policy as outlined in Appendix A of these Conditions of Service. TBHEDI reserves the right to amend the policy from time to time.

2.4.4 Billing

In preparing an energy billing for standard supply service, TBHEDI includes in its billing a number of charges mandated by third parties, such as:

(a) The Independent Electricity System Operator (IESO)

- Under standard supply service - the price of the electrical energy commodity

(b) Hydro One

- Transmission connection charge
- Transmission network charges

(c) The Provincial Government

- Debt retirement charge
- Wholesale market service charge
- Rural rate assistance

(d) Retailers

- If you purchase your electricity from a retailer, but you receive your bills from TBHEDI (i.e., distributor consolidated billing) the price of the electrical energy commodity will be the price supplied to us by your retailer.

The rates charged for the above services, with the exception of the market price for electricity as invoiced by the IESO, or retailer charges for the electrical energy commodity under distributor consolidated billing, are approved by the Ontario Energy Board. The retailer charges for the electrical energy commodity are based on agreements signed by the customer with their retailer.

TBHEDI facilitates the operation of the electrical energy market by billing and collecting these amounts on behalf of these third parties. These may change from time to time.

Some Customers that sign agreements with electricity retailers may receive their invoice from their retailer. These charges will also appear on the retailer invoice (in addition to TBHEDI's distribution charges).

2.4.4.1 Establishment of Billing Services

Prior to the establishment of billing services, a customer must provide to TBHEDI the following:

(a) two items of identification, with one containing a photograph;
(b) a security billing deposit; and
(c) a signed service agreement.

Failure to meet these requirements will delay the establishment of the supply of electrical energy.

2.4.4.2 Establishment of Rate Class

The establishment of a rate class appropriate to a customer is dependent on the nature of electrical service being supplied to the customer's building.

See Sections 3.1, 3.2, 3.3 and 3.4 and the tariff sheet for further details.

2.4.4.3 Billing Frequency

TBHEDI may, at its option, render bills to its Customers on either a monthly, bi-monthly, quarterly or annual basis or such other periodic basis as may be determined from time to time.

2.4.4.4 Prorating Bills and Service Charges

Service and demand charges will be prorated for initial and final bills only. Charges will be based on a straight ratio calculation of the number of days of service to a standard 30-day month.

2.4.4.5 Estimating Bills

Reasonable attempts will be made to obtain a meter reading for all regular electricity bills, based on access to the meter (see Section 2.3.7.11 Meter Reading). If TBHEDI has been unsuccessful in obtaining a meter reading, the reading will be estimated. Estimates are done based on historical consumption information for the account, where possible. If there is not enough historical information on the account to provide an estimate, then historical information on the previous occupant of the location may be used instead. Demand readings will be estimated in a similar fashion when required.

2.4.4.6 Account Setup Charge

A setup charge shall be applied to all new accounts, regardless of the Customer's account history with TBHEDI. The charge shall be at a rate approved by the Ontario Energy Board.

2.4.4.7 Arrears Certificate / Lawyer's Letter

When a property is purchased, the buyer's lawyer may request a form letter be filled out by TBHEDI, which lists any equipment rentals, or outstanding arrears that are linked to the property. TBHEDI shall levy a charge for each service address requested.

2.4.4.8 Transformer Ownership Credit

A credit will be provided for all Customers owning their own distribution transformer. The credit will be at a rate approved by the Ontario Energy Board.

2.4.4.9 Primary Meter Discount

Commercial Customers that are metered on the primary side of the transformer shall receive a discount to adjust for the transformer losses. The discount will be at a rate approved by the Ontario Energy Board.

2.4.4.10 Power Factor Adjustment

A Customer with measured demand will be billed for distribution services based on the measured kilowatts or 90% of the measured kilovolt-amperes, whichever is greater.

Any dispute under this part shall be resolved in accordance with Section 1.8 of these Conditions of Service.

2.4.5 Payments and Late Payment Charges

2.4.5.1 Payments

Unless otherwise agreed to between the Customer and TBHEDI, all bills shall be payable, in full, on or before the due date clearly shown on the bill. Payments may be made in the following ways:

- At our 34 North Cumberland Street office or night deposit box outside*;
- At any of several authorized depots located throughout the city;
- By mail – do not send cash*;
- ATM Machine/ PC/Telephone banking through the Customer's bank, Trust Company or Credit Union.
- Credit card – by phone or internet. Note: A convenience fee will be charged by the processing company.

**Personal/certified cheques, and money orders are acceptable forms of payment, unless otherwise noted.*

2.4.5.2 Payment Plans

Budget Billing - TBHEDI shall offer an equal monthly payment plan option to residential customers based on criteria established in Section 2.6.2 of the Standard Supply Service Code.

This plan is available to all Residential Customers upon request, *except those enrolled with a retailer*. If payments are not maintained or remain outstanding, the Customer shall be automatically removed from the plan; standard billing and collection timelines shall then apply.

Pre-authorized Debit – A pre-authorized bank debit of the net-billed amount shall be withdrawn from the Customer's bank account on the due date of the bill according to the billing cycle. This plan is available to all Customers upon request, *except those enrolled with a retailer under the retailer-consolidated billing option*.

Customers may request to opt out of a payment plan at any time, at which point standard billing and collection timelines shall apply.

TBHEDI will offer Arrears Payment Agreements to all Residential customers, based on criteria established in Section 2.7 of the Distribution System Code.

Upon entering an Arrears Payment Agreement, customers will be required to make a down payment of up to **15%** of the arrears, plus any accumulated late payment charges. Service charges, such as reconnection charges, will not be included when entering into an arrears management agreement. These charges will be included on the customer's next billing.

Upon activation of an Arrears Payment Agreement, all future hydro bills must be paid in full by the due date. These future bills may include a "replacement" security deposit amount.

TBHEDI will cancel the agreement if a customer defaults on the arrears payment or current bill payment more than once. Customers will be given ten (10) calendar days written notice before an agreement will be cancelled and the agreement will be reinstated if the customer pays all amounts owing in full before the cancellation date.

TBHEDI shall make available to a residential electricity customer a second arrears payment agreement if the customer so requests**,** provided that two (2) years or more has passed since a first arrears payment agreement was entered into, and provided that the customer performed his or her obligations under the first arrears payment agreement.

TBHEDI will make available an Arrears Management Program and will offer Arrears Payment Agreements to all Residential customers who are unable to pay their electricity charges and are eligible Low-Income Customers (LEAP) as determined by the Distribution System Code.

Where an eligible LEAP customer enters into an arrears payment agreement for the first time, or subsequent to having successfully completed a previous arrears payment agreement as an eligible low-income customer, TBHEDI may require that the customer pay a down payment of up to 10% of the electricity charge arrears accumulated, inclusive of any applicable late payment charges but excluding other service charges.

Where a LEAP Customer enters into an Arrears Payment Agreement, all service charges related to collection, disconnection or non-payment will be waived. Accrued late payment charges will not be waived; however no further late payment charges will be charged to the account that is the subject of a payment agreement.

Upon activation of an Arrears Payment Agreement, all future hydro bills must be paid in full by the due date.

TBHEDI will suspend any disconnection action for a period of twenty-one (21) days from the date of notification by a social service agency or government agency ***that partners with TBHEDI to assess Emergency Financial Assistance eligibility*** that it is assessing a residential customer for the purposes of determining whether the customer is eligible to receive such assistance, provided such notification is made within ten (10) days from the date on which the disconnection notice is received by the customer.

TBHEDI will make available to eligible LEAP customers equalized monthly billing and these customers will not be required to have Pre-Authorized Deposit.

2.4.5.3 Late Payment Charges

All bills, including final bills, are due and payable sixteen (16) days from the date of mailing. A late payment charge (interest on past due accounts) shall be applied to all accounts not paid by the due date. If the Customer makes a partial payment on or before the due date, the late payment charge will be calculated based only on the outstanding amount of the bill.

2.4.5.4 Returned Cheque Charge

A charge shall be applied to the Customer's account for any payment that cannot be processed.

2.4.5.5 Collection of Account Charge

A collections charge shall be applied to a Customer's account when an authorized agent of TBHEDI is sent to the Customer's premises for purposes of collecting arrears amounts.

2.4.5.6 Disconnection and Reconnection Charges

Ultimately, non-payment can lead to disconnection, and a reconnection will not be made until payment of arrears is received (may also include payment of a disconnection charge).

TBHEDI's disconnection policy is explained in section 2.2 of these Conditions of Service. Following a service disconnect for non-payment, a reconnection charge may be applied to a customer's account when service is reconnected/restored.

Only one (1) reconnection charge or collection charge shall be applied in the same billing period following service disconnect for non-payment.

2.5 Customer Information

TBHEDI shall process and handle requests for Customer information in accordance with the requirements of Chapter 11 of the Retail Settlement Code.

TBHEDI shall not disclose specific information about a Customer unless the release of information had been authorized by that particular Customer or unless necessary for compliance with Market Rules or any Board approved Code or Standard.

Customers have the obligation to provide TBHEDI with information that is true, complete and correct.

2.5.1 Billing Information

TBHEDI shall address customer inquiries concerning distribution service, meter accuracy and bill calculation errors. TBHEDI will refer all inquiries pertaining to retailer pricing or contract terms to the relevant retailer. Inquiries as to usage, including how usage might be modified, may be addressed by either TBHEDI, for Standard Supply Service (SSS) Customers, or referred to the Customer's retailer.

2.5.2 Historical Information to Designated Parties

Customers have the right upon request to have historical usage information, information about their meter configuration and payment information sent to their service address or to any designated retailer or third party.

Upon written request by the Customer, TBHEDI will provide to the Customer or one or more retailers, usage data, meter data and payment information. TBHEDI shall provide data for no less than one calendar years' worth of information, unless the Customer has been connected to TBHEDI's distribution system for less than one year. TBHEDI will honour requests once a year for historical data to Retailers and Customers, if not

delivered electronically through the EBT system. TBHEDI, at its discretion, may charge a fee for any additional requests based on actual costs incurred. A request is considered delivery of data to a single address.

2.5.3 Historical Information to Third Parties

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

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

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

SECTION 3: DISTRIBUTION ACTIVITIES (CUSTOMER CLASS SPECIFIC)

3.1 Residential

3.1.1 Definition of Class

This section refers to the supply of electrical energy to detached and semi-detached residential buildings as defined in the local zoning by-laws.

Where electricity is provided to a combined residential and business building, and the service does not provide for separate metering, the classification shall be at the discretion of TBHEDI and shall be based on such considerations as the estimated predominant consumption.

Services to residential buildings other than detached or semi-detached will be treated the same as General Service Class Customers and will be subject to the provisions of either Section 3.2 or 3.3 of these Conditions of Service, as applicable.

For the purposes of connections under these Conditions of Service, subdivision developments, multi-units or townhouse-type developments are not considered as Residential. They will be treated as General Service Class developments and subject to the provisions of Section 3.3 of these Conditions of Service.

3.1.2 General Information

All new lots created by severance or subdivision shall be supplied by underground secondary service where it enters the Customer's property in accordance with the City of Thunder Bay's requirements.

Where practical, there shall be only one Supply Point to each land parcel. In all cases, there shall be only one service to a building.

In circumstances where multiple services are installed to a building and one service is to be upgraded, the upgraded service will replace all existing services.

Under special conditions, where TBHEDI determines feasible, a second service may be allowed to a second unattached building on the same property. This service will be at full cost to the Customer. The total amperage under this condition on a single land parcel will not exceed 400-amps. For semi-detached buildings with required fire separation, there may also be two services.

Residential services will include all services up to and including 400-amp, 120/240 V single-phase 3-wire. Residential Customers requiring an electrical service greater than 400-amp single-phase 120/240 V, shall be treated the same as General Service in Section 3.2 or 3.3 as applicable. In some cases, at the sole discretion of TBHEDI, a 600-amp single phase service may be considered.

The following residential service sizes are available:

- 100-amps minimum
- 200-amps
- 400-amps maximum
- Beyond these limits, a primary service will be required, as described under Section 3.2

3.1.3 Information Requirements for Service

At the time the request is made for service, the Customer shall submit the following:

- Address (complete municipal address);
- Name, address, telephone number, fax number and e-mail address of the Owner;
- Previous address of the Owner;
- Name, address, telephone number, fax number and e-mail address of the person to contact regarding the technical aspects of the service;
- Required in service date;
- Proposed service entrance capacity and voltage rating of the service entrance equipment;
- Survey plan and site plan indicating the proposed location of the service entrance equipment with respect to rights-of-way and lot lines; and
- All information required for setting up a billing account.

3.1.4 Point of Demarcation

The Demarcation and Ownership Points are as follows:

3.1.4.1 For residential secondary overhead, the line of ownership demarcation between TBHEDI and the Customer is the connection at the top of the Customer's service mast. TBHEDI will own and install the secondary overhead service from the secondary connection of the transformer or secondary bus to the Customer's service mast. On private property, TBHEDI shall not own the poles or hardware as they are not part of the components of the Basic Minimum Service;

3.1.4.2 For residential overhead primary, the line of ownership demarcation will be the first device contacted on the Customer's property, being an insulator, line tap, cut-out, or other operating device. TBHEDI may own the transformation on the Customer owned poles. TBHEDI shall not own the poles, hardware, and primary conductors, up to and including the transformation pole on the Customer's property. ;

3.1.4.3 For residential underground services owned by TBHEDI, the line of ownership demarcation between TBHEDI and the Customer is the line-side of the meter base on the Customer's property. TBHEDI will own the secondary underground service from the secondary connection of the transformer or secondary bus to the line-side of the Customer's meter base;

3.1.4.4 For underground primary services, the line of ownership demarcation will be the first operating device on the Customer's property, i.e. transformer or switchgear. Sections of 3.1.4.2 may also apply.

TBHEDI may own transformation on Customer owned primary services. In all cases on private property, the Customer shall own and maintain any poles from the first point of attachment.

In all cases, TBHEDI owns the revenue meter.

The Operational Demarcation Point for a residential service is at the meter base. Thus TBHEDI has operational control of all equipment whether owned by TBHEDI or not, up to and including the meter.

TBHEDI reserves the right to have the customer's first pole located within 5 metres of the property line.

3.1.5 Metering

Meters for new or upgraded residential services will be mounted outdoors on a meter socket approved by TBHEDI. Where revenue metering is located inside a residence, it will be relocated by the owner to the exterior of the building at the time of upgrading.

Each dwelling of a semi-detached or duplex arrangement shall be separately metered.

A meter socket base must be installed outside on the line-side of the main disconnect on all single phase services up to and including 400-amp. All 400-amp services are to have a 400-amp self-shorting residential outdoor meter base with 300:5 current transformer accommodation. The meter will be supplied by TBHEDI

(a) Meter sockets of an approved manufacturer shall be provided. The Customer should contact TBHEDI to confirm details.
(b) Clear unobstructed access must be maintained to and in front of the meter location.
(c) 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 1 m of the face of the building (in front of any existing or proposed fence), unless otherwise approved by TBHEDI.

The following meter installation types and equipment are acceptable to TBHEDI:

(a) 120/240 V, Single-phase, 3-wire, 200-amp maximum
(b) All underground and 200-amp overhead services must have an oversize enclosure, 4-jaw socket, 200-amp meter base with lugs capable of accepting 250 MCM copper or aluminum wire.
(c) All 100-amp overhead services must have a 100-amp rated, 4-jaw socket type meter base.

3.1.6 Overhead Services for Residential Services

3.1.6.1 Minimum Requirements

Overhead service to buildings included in Section 1 will be a three-wire single-phase, with a nominal voltage of 120/240 V, No service wires are to be tampered with. If in doubt about the service location on the building, check with TBHEDI Power Systems Division.

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

- A clevis type insulator is to be supplied and installed by the Customer.
- This point of attachment device must be located:
  (a) Not less than 4.5 m nor greater than 5.5 m above grade (to facilitate proper ladder handling techniques).
  (b) Between 150 mm and 300 mm below the service head.
  (c) Within 914 mm of the face of the building.
- Clearance must be provided between utility conductors and finished grade of at least 6 m over traveled portions of the road allowance and 4.5 m over all other areas. A minimum horizontal clearance of 1.0 m must be provided from utility conductors and any second storey windows.
- A 4-jaw meter socket of an approved manufacturer shall be provided. Certain areas will require a 5-jaw socket as determined by TBHEDI. The Customer should contact TBHEDI to confirm details.

3.1.6.2 Services over Swimming Pools

TBHEDI will **not** allow new electrical conductors to be located above swimming pools.

Where a 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, TBHEDI will provide up to 30 m of overhead service conductors, at no charge, to allow rerouting of the service. The property owner will pay any other costs.

3.1.7 Underground Services for Residential Services

3.1.7.1 Minimum Requirements

TBHEDI will determine the meter location in relation to the supply point designated by TBHEDI. The meter shall be located on the nearest wall to TBHEDI's pole line or distribution system, or no more than 3 m back from this wall along the side of the house.

The service size can be 100-amps minimum up to 400-amps maximum with the following requirements.

- Meter socket must be a minimum of 200-amps.
- The line-side conduit must be a minimum of 51 mm diameter
- Service length for 3/0 conductor will be a maximum of 72 m; and for 250 MCM conductor will be a maximum of 100 m

- Service length will be measured along the cable route from the connection point at the service pole to the meter.
- The owner will assure the provision for the service entrance and meter meets TBHEDI's approval.
- Where there are other services to be installed (e.g. gas, telephone, and cable), these shall be coordinated to avoid conflict with TBHEDI's underground cables.
- It is the responsibility of the owner to contact TBHEDI to inspect each trench prior to the installation of TBHEDI's service cables.
- All work performed by the Customer is subject to inspection and approval by TBHEDI
- The owner shall provide unimpeded access for TBHEDI to install the service.
- The owner shall ensure that any intended tree planting has appropriate clearance from underground electrical plant.
- The Customer's overhead line must be self-supporting

Service sizes beyond these limits will require a primary service as described under Section 3.2

It is the Customer's responsibility to obtain all necessary permits when excavating on the City of Thunder Bay road allowance. TBHEDI may request a copy of the Road Cut Permit prior to taking ownership of any civil works constructed on City property.

3.1.7.2 Semi-detached, Row Houses, Townhouses

Where each unit is essentially a "single family dwelling," which provides facilities ordinarily required for the accommodation of one family and where each unit is a separately deeded property. Service for each unit to be 100-amps minimum. Row houses and townhouses must have underground services supplied from a single transformer located on an easement of one of the unit properties.

3.1.7.3 Underground Service Relocation

If an existing underground service needs to be relocated, the Customer will be required to pay the full costs incurred by TBHEDI for the relocation.

Requests for trenching for underground service through a yard, which is already landscaped, may be rejected, if in TBHEDI's opinion, digging cannot be performed without damaging shrubs, trees, patios, etc. The Customer may, however, provide their own trenching to TBHEDI's requirements.

3.2 General Service (Under 50 kW)

3.2.1 Definition of Class

All non-Residential Customers with an average peak demand less than 50 kW over the preceding twelve months are to be classified as General Service (Under 50 kW). For new Customers without prior billing history, the peak demand will be based on 90% of the proposed capacity or installed transformation.

For three-phase services, the Customer shall maintain a balanced three-phase load. Where single-phase step down transformers are employed by the Customer on their premises, they shall not exceed 25% of total connected transformation capacity.

Apartment buildings or multi-unit complexes are treated as General Service in Section 3.3 or 3.4 as applicable.

3.2.2 General Information

See Section 2.3.4.2 for standard voltages available from TBHEDI. The Customer shall obtain the prior approval from TBHEDI for the use of any specific voltage at any specific location.

Where practical, there shall be only one Supply Point to each land parcel. In all cases, there shall be only one service to a building.

In circumstances where multiple services are installed to a General Service Customer's building and one service is to be upgraded, the upgraded service will replace all existing services.

It is the Customer's responsibility to ensure that all transformers, poles and conductors located on private property are kept clear of any obstructions in order to facilitate regular and emergency maintenance. Obstructions may include vegetation, structures and landscaping. Removal of any obstruction by TBHEDI will be at the expense of the Customer. The customer must maintain 3m of working clearance in front of transformer and 1.5 m on the other 3 sides of the transformer from fences, shrubs and structures.

3.2.3 Information Requirements for Service

At the time the request is made for service, the Customer shall submit the following:

- Address (complete municipal address);
- Name, address, telephone number, fax number and e-mail address of the Owner;
- Name, address, telephone number, fax number and e-mail address of the person to contact regarding the technical aspects of the service;
- Required in-service date;
- proposed service entrance equipment's rated capacity (amperes) and voltage rating and metering requirements;
- Proposed 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 electrical energy;
- Survey plan and electrical site plan drawn to scale, showing the following:
  (a) indicating the proposed location of the service entrance equipment with respect to public rights-of-way and lot lines;
  (b) location of metering equipment; and
  (c) indication of how TBHEDI will gain direct outside access to the meter(s);

- Schematic drawing of the main secondary distribution system, showing the following:
  (a) voltage;
  (b) size, number, and material of the service entrance conductors;
  (c) main disconnect switch, including size in amperes;
  (d) metering equipment; and
  (e) disconnect switches for each metered sub-feed;
- Number and size of services to individual units;
- Plan to scale, showing the electrical room and provision for metering;
- Grading and site plan showing building(s) in relation to existing and proposed property lines, other buildings, streets and driveways, and the location of other sources, gas, telephone and water;
- All information required to set up a billing account; and
- Electrical, architectural and/or mechanical drawings as required by TBHEDI.

3.2.4 Point of Demarcation

The Demarcation Points are as follows:

- for Overhead Secondary at the property line (not requiring transformation facilities on private property), it is the top of the Customer's service mast or the line-side of the meter base/junction box where the service transitions to underground;

- for Overhead Primary at the property line (requiring transformation facilities on private property), it is the first point of attachment on private property. TBHEDI will supply at a cost to the Customer and assume ownership and maintenance of the transformer;

- for Secondary Underground service (not requiring transformation facilities on private property), it is the line-side of the exterior mounted meter base or junction box; or

- for Primary Underground services onto Customer's property it is to the secondary terminals of the transformer. TBHEDI will supply at a cost to the Customer and assume ownership and maintenance of the transformer.

In all cases on private property, the Customer shall own and maintain any poles from the first point of attachment and all ducts as these are not part of the components of the Basic Minimum Service.

In all cases, TBHEDI owns the revenue meter.

The Operational Demarcation Point is, for both overhead and underground services, at the exterior mounted meter base or junction box, whichever comes first.

3.2.5 Location of Service Equipment

The location of the supply point, primary and secondary cables, transformer, and metering will be established through consultation with TBHEDI for both new and

upgraded services. Failure to comply may result in the relocation of the service at the owner's expense.

3.2.6 Metering

The Customer shall provide the following equipment in order to accommodate TBHEDI's meter installation:

(a) If the service is 120/240 V, 200-amp, a single-phase 4-jaw outdoor meter socket; or
(b) If the service is 120/240 V, 400-amp, single-phase, a 4-jaw outdoor meter socket; or
(c) If the service is 120/208 V, 200-amp, three-phase, a 7-jaw indoor meter socket connected on the load-side of the main disconnecting device; or
(d) If the service is 347/600 V, 100-amp, three-phase, a 7-jaw indoor meter socket with an insulated neutral, and connected on the load-side of the main disconnecting device.

See Section 2.3.7 and Appendix F of these Conditions of Service for requirements.

3.2.7 Electrical Room Requirements (As Applicable)

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.

Access doors, panels, slabs, and vents shall be kept free from obstructing objects. The Customer will provide unimpeded and safe access to TBHEDI 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 direct access from the outside so that it is readily accessible to TBHEDI'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 padbolt with mortise strike. TBHEDI shall provide a secure arrangement so that TBHEDI's padlock can be installed as well as the Customer's lock.

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.

The owner shall identify each Customer'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 General Service (50 to 999 kW)

3.3.1 Definition of Class

All non-residential Customers with an average peak demand between 50 kW and 999 kW over the preceding twelve months are to be classified as General Service (50 kW to 999 kW) Customers. For new Customers without prior billing history, the peak demand will be based on 90% of the proposed capacity or installed transformation.

The maximum allowed single phase service is 120/240 V, 400-amp. For three-phase services, the Customer shall maintain a balanced three-phase load. Where single-phase step down transformers are employed by the Customer on their premises, they shall not exceed 25% of total connected transformation capacity.

3.3.2 General

See Section 2.3.4.2 for standard voltages available from TBHEDI. The Customer shall obtain the prior approval from TBHEDI for the use of any specific voltage at any specific location.

Where practical there shall be only one Supply Point to each land parcel. In all cases, there shall be only one service to a building.

In circumstances where multiple services are installed to a General Service Customer's building and one service is to be upgraded, the upgraded service will replace all existing services.

It is the Customer's responsibility to ensure that all transformers, poles and conductors located on private property are kept clear of any obstructions in order to facilitate regular and emergency maintenance. Obstructions may include vegetation, structures and landscaping. Removal of any obstruction by TBHEDI will be at the expense of the Customer.

3.3.3 Information Requirements for Service

At the time the request is made for service, the Customer shall submit the following:

- Address (complete municipal address);
- Name, address, telephone number, fax number and e-mail address of the Owner;

- Name, address, telephone number, fax number and e-mail address of the person to contact regarding the technical aspects of the service;
- Required in-service date;
- proposed service entrance equipment's rated capacity (amperes) and voltage rating and metering requirements;
- Proposed 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 electrical energy;
- Survey plan and electrical site plan drawn to scale, showing the following:
  (a) indicating the proposed location of the service entrance equipment with respect to public rights-of-way and lot lines;
  (b) location of metering equipment; and
  (c) indication of how TBHEDI will gain direct outside access to the meter(s);
- Schematic drawing of the main secondary distribution system, showing the following:
  (a) voltage;
  (b) size, number, and material of the service entrance conductors;
  (c) main disconnect switch, including size in amperes;
  (d) metering equipment; and
  (e) disconnect switches for each metered sub-feed;
- Number and size of services to individual units;
- Plan to scale, showing the electrical room and provision for metering;
- Grading and site plan showing building(s) in relation to existing and proposed property lines, other buildings, streets and driveways, and the location of other sources, gas, telephone and water;
- All information required to set up a billing account; and
- Electrical, architectural and/or mechanical drawings as required by TBHEDI.

Where project drawings are required for TBHEDI's approval, for items under TBHEDI's jurisdiction, the Customer or its authorized representative must ensure that proposal drawings are fully in compliance with TBHEDI's standards. Approval of project drawings by TBHEDI shall not relieve the Customer of its responsibility in respect of full compliance with TBHEDI's standards. In all cases, one copy of all relevant drawings must be submitted to TBHEDI. 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 TBHEDI including the approximate date that the Customer requires the electrical service and the due date that TBHEDI's civil construction drawings are required 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, etc.

3.3.3.3 Floor Plan

Show the service location, other services location, driveway, and 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 TBHEDI.

3.3.3.5 Transformer Location

Indicate the preferred location on the property for the high voltage transformation. This is subject to approval by TBHEDI. Transformation will be vault, pad-mounted or pole-mounted 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, etc. Also, indicate the estimated initial kilowatt demand and ultimate maximum demands. Provide protection equipment information where coordination is required between TBHEDI and Customer owned equipment. Fusing will be determined later by TBHEDI 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 TBHEDI'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 3.3.5.1), 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 Point of Demarcation

The Demarcation Points are as follows:

- for Overhead Secondary at the property line of 347/600 V (allowed up to 300 kVA) or 120/208 V (allowed up to 112.5 kVA), not requiring transformation facilities on private property, it is the top of the Customer's service mast or the line-side of the meter base/junction box where the service transitions to underground;
- for Overhead Primary at the property line requiring transformation facilities on private property it is the first point of attachment on private property. TBHEDI will supply at a cost to the Customer and assume ownership and maintenance of transformers up to 1000 kVA;
- for Secondary Underground at the property line (allowed up to 300 kVA), it is the line-side of the exterior mounted meter base or junction box; or
- for Primary Underground onto Customer's property it is to the secondary terminals of the transformer. TBHEDI will supply at a cost to the Customer and assume ownership and maintenance of transformers up to 1000 kVA.

In all cases on private property, the Customer shall own and maintain any poles from the first point of attachment and all ducts.

In all cases, TBHEDI owns the revenue meter.

3.3.5 Location of Service and Equipment

See Section 3.2.5

3.3.6 Metering

The Customer shall provide the following equipment in order to accommodate TBHEDI's meter installation:

(a) for self-contained metering up to 200-amp – a self-contained meter installation at low voltage where the rating of the Customer's main disconnecting device does not exceed 200-amp shall be provided with:

- 120/240 V, 200-amp, single-phase 4-jaw outdoor meter socket connected on the load-side of the main disconnecting device; or
- 120/208 V, 200-amp, three-phase 7-jaw indoor meter socket connected on the load-side of the main disconnecting device; or
- 347/600 V, 200-amp, three-phase 7-jaw indoor meter socket with an insulated neutral jaw, and connected on the load-side of the disconnecting device;

(b) for 120/240 V, 400-amp – a single-phase transformer-type meter installation at 120/240 V where the rating of the Customer's main disconnecting device ranges from greater than 200-amp up to 400-amp shall be provided with:

- a 400-amp self-shorting outdoor meter base with 300:5 A current transformer accommodations. TBHEDI will supply the meter and current transformers at the Customer's expense;

(c) for three-phase less than 500 kW – a three-phase transformer-type meter installation that is not equipped with interval meters and where the monthly average peak demand during a calendar year is forecast by TBHEDI, not to exceed 500 kW shall be provided with:

- meter base to be located in electrical room as per Section 3.3.7 of these Conditions of Service;
- 250-amp or greater, three-phase 13-jaw indoor meter socket connected on the load-side of the main disconnecting device;
- meter base and instrument transformer compartment specifications to be in accordance with Appendix F of these Conditions of Service;
- switchgear utility compartment in accordance with Appendix F of these Conditions of Service;
- 25 mm conduit from the instrument transformer enclosure to the meter enclosure;

(d) for three-phase greater than 500 kW – a transformer-type meter installation for a secondary service where the monthly peak demand during a calendar year is forecast by TBHEDI to exceed 500 kW is required to have an interval meter and shall provide:

- meter base to be located in electrical room as per Section 3.3.7 of these Conditions of Service;
- meter base and instrument transformer compartment specifications to be in accordance with Appendix F of these Conditions of Service;
- switchgear utility compartment in accordance with Appendix F of these Conditions of Service.
- 31 mm conduit from the instrument transformer enclosure to the meter enclosure;
- provisions for interval metering will be made as per Section 2.3.7.10
- a voice grade direct access telephone line that is active 24-hours every day, and protected by a 13 mm conduit from the telephone entrance into the meter enclosure.

In addition, see Section 2.3.7 and Appendix F, of these Conditions of Service for requirements.

3.3.7 Electrical Room Requirements

Where the size of the Customer's electrical service warrants, 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 TBHEDI, to house the necessary transformer(s) and/or switching equipment. TBHEDI will provide planning details upon application for service.

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 pad / 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 TBHEDI'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. TBHEDI shall provide a secure arrangement so that TBHEDI's padlock can be installed as well as the Customer's lock.

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.

The owner shall identify each Customer'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.

3.3.8 Transformation – Utility Owned

TBHEDI will supply at a cost to the Customer and assume ownership of transformation up to 1000 kVA. The Customer may own their own transformation assuming all maintenance and replacement costs, as well as receiving a transformation credit allowance. Unless noted otherwise, transformation will be on the Customer's property, and on foundations or transformer rooms supplied by the Customer. TBHEDI will determine the size of the transformer that it will supply.

When the transformation is supplied by TBHEDI, it must be accessible by a roadway/parking lot capable of carrying heavy trucks. This roadway/parking lot is to facilitate the installation, repair or replacement of the transformer by TBHEDI personnel. An access roadway, when required, will be installed and maintained by the Customer.

Depending upon location, TBHEDI may require concrete filled steel bollards (bumper posts) in accordance with TBHEDI specifications.

3.3.9 Technical Considerations

3.3.9.1 Short Circuit Ratings

- 13800/24000 V Supply: The Customer's protective equipment shall have a minimum three phase, short circuit rating of 900 MVA symmetrical. The asymmetrical current is 32000 A (1.6 factor used).
- 7200/12470 V Supply: The Customer's protective equipment shall have a minimum three phase, short circuit rating of 100 MVA symmetrical. The asymmetrical current is 7500A (1.6 factor used.)
- 2400/4160 V Supply: The Customer's protective equipment shall have a minimum three phase, short circuit rating of 175 MVA symmetrical. The asymmetrical current is 36000A (1.6 factor used.)
- 600/347 V Supply: Available short circuit current may be obtained upon request to TBHEDI.
- 208/120 V Supply: Available short circuit current may be obtained upon request to TBHEDI.

3.3.9.2 Primary Fusing

All equipment connected to the TBHEDI's distribution system shall satisfy the short circuit ratings specified in Section 3.3.9.1. The Customer and/or the Customer's consultant shall specify the fuse link rating and demonstrate coordination with TBHEDI's upstream protection including station breakers and/or distribution fuses. The Customer shall submit a coordination study to TBHEDI 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.

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

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

(a) 2400/4160 - 60 kV B.I.L.
(b) 7200/12470 - 95 kV B.I.L

(c) 13800/24000 - Grounded Wye primary 125 kV B.I.L.

3.4 General Service (Above 1000 to 4999 kW) and Large Users (Above 5000 kW)

3.4.1 Definition of Class

All non-Residential Customers with an average peak demand above 1000 to 4999 kW over the preceding twelve months are to be classified as General Service (Above 1000 to 4999 kW). For new Customers without prior billing history, the peak demand will be based on 90% of the proposed capacity or installed transformation.

All non-Residential Customers with an average peak demand above 4999 kW over the preceding twelve months are to be classified as General Service (Above 5000 kW). For new Customers without prior billing history, the peak demand will be based on 90% of the proposed capacity or installed transformation.

3.4.2 General

See Section 2.3.4.2 for standard voltages available from TBHEDI. The Customer shall obtain the prior approval from TBHEDI for the use of any specific voltage at any specific location.

Where practical there shall be only one Supply Point to each land parcel. In all cases, there shall be only one service to a building.

In circumstances where multiple services are installed to a General Service Customer's building and one service is to be upgraded, the upgraded service will replace all existing services.

It is the Customer's responsibility to ensure that all transformers, poles and conductors located on private property are kept clear of any obstructions in order to facilitate regular and emergency maintenance. Obstructions may include vegetation, structures and landscaping. Removal of any obstruction by TBHEDI will be at the expense of the Customer.

3.4.3 Information Requirements for Service

For details see Section 3.3.3.

3.4.4 Point of Demarcation

The Operational and Ownership Demarcation Point for a General Service Customer, in this section, is as follows:

- for Overhead Primary requiring transformation facilities on private property it is the first point of attachment, which shall be the line-side of the Customer's primary load break switch on private property,
- for Primary Underground it is the line-side of the Customer's padmount primary load break switch located just inside the Customer's property.

In all cases on private property, the Customer shall own and maintain any poles from the first point of attachment and all ducts.

In all cases, TBHEDI owns the revenue meter.

3.4.5 Location of Service and Equipment

For details see Section 3.2.5.

3.4.6 Metering

The Customer shall provide the following equipment in order to accommodate TBHEDI's meter installation:

- provision for instrument transformers as per Appendix F of these Conditions of Service;
- meter cabinet, weatherproof if located in an outside installation, as per Appendix F of these Conditions of Service;
- 31 mm conduit from the instrument transformers to the meter enclosure;
- a voice grade direct access telephone line that is active 24 hours every day and protected by a 13 mm conduit from the telephone entrance equipment to the meter enclosure as per Section 2.3.7.10
- 120 V, 15 A fused auxiliary power supply to be supplied to the inside of the metering cabinet with one (1) GFI duplex receptacle;
- in addition, service registration as a wholesale meter point must meet IESO requirements;
- in addition, see Section 2.3.7 and Appendix F of these Conditions of Service for requirements.

3.4.7 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 TBHEDI's requirements for high voltage installations. TBHEDI will provide system requirement details upon application for service.

Customer-owned substations include 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 V.

All high voltage distribution services are three-phase, 4-wire. The Customer is required to bring out a neutral conductor for connection to the TBHEDI's distribution system neutral. If not required for Customer's use, this neutral shall be terminated to the Customer's station ground system. TBHEDI will provide Customer interface details and requirements for high voltage supplies.

It is recommended that Customers' transformers have voltage taps in their primary windings as shown below:

Transformer Primary Voltage	Recommended Primary Voltage Taps				
	+5%	+2.5%	0%	-2.5%	-5%
24,940/14,440 V Grd Y	26,187 V	25,564 V	24,940 V	24,317 V	23,693 V
12,470/7,200 V Grd Y	13,094 V	12,782 V	12,470 V	12,158 V	11,847 V
4,160/2,400 V Grd Y	4,368 V	4,264 V	4,160 V	4,056 V	3,952 V

Transformers other than listed may be suitable but shall not be connected without the specific written approval of TBHEDI.

Customer-owned substations, prior to energization, must be inspected by both the Electrical Safety Authority and TBHEDI. The owner will provide a pre-service inspection report to TBHEDI. A Qualified Contractor will prepare the certified report to TBHEDI.

The Customer 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, TBHEDI will provide one power interruption annually, at no charge, in lieu of or coincident to interruptions arranged for the installation, maintenance, and testing of vault fire alarm detectors. This no-charge service will be scheduled during TBHEDI's normal business hours, Monday to Friday, but the time cannot necessarily be guaranteed. TBHEDI may charge Customers for power interruption requests arranged at times other than as outlined above.

3.4.8 Transformation

A General Service (Above 1000 –4999 kW) and (Above 5000 kW) Customer shall provide, own and be responsible for transformation facilities from high voltage to low voltage at the Customer's premises and, as such, shall construct, maintain and operate said transformation facilities in accordance with the requirements of the Ontario Electrical Safety Code.

Customer-owned transformers connected to TBHEDI's distribution system shall be built in accordance with CAN/CSA Standard C802, Maximum Losses for Distribution, Power and Dry Type Transformers. Impedances that exceed the values specified in the standard are not acceptable. For transformers larger than 3000 kVA, total losses that exceed 0.8% of the kVA rating of the transformer are not acceptable.

3.4.9 Technical Information and Considerations

The same information and considerations apply as for other General Service Customers. Refer to Subsection 3.3.3 and 3.3.9 for applicable requirements.

3.5 Embedded Generation

Section 3.5 does not apply to the connection or operation of an emergency backup generation facility, Refer to Subsection 2.3.6 for Emergency Backup Generation Facilities and their applicable requirements.

For all technical information regarding generator connections including the connection agreement between TBHEDI and the customer refer to the "Generator Information Package", available upon request in person from a TBHEDI customer service representative, via email from connections@tbhydro.on.ca, or on the website at http://www.tbhydro.on.ca.

3.6 Embedded Market Participant

Chapter 2, Section 1.2.1 of the IESO Market Rules states: "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 area of TBHEDI are required to inform TBHEDI that they have been authorized by the IESO at least thirty (30) days prior to their participation in the Ontario electricity market. All embedded market participants are responsible for all TBHEDI charges as approved by the Ontario Energy Board.

An embedded market participant shall enter into a Connection Agreement in a form acceptable to TBHEDI. Until such time as the embedded market participant executes such a Connection Agreement with TBHEDI, the embedded market participant shall be deemed to have accepted and agreed to be bound by these Conditions of Service, and the terms of any operating schedule delivered to it from time to time by TBHEDI.

3.7 Embedded Distributor

All embedded distributors within the service area of TBHEDI are required to inform TBHEDI of their status in writing, thirty (30) days prior to the supply of energy from TBHEDI. The terms and conditions applicable to the connection of an embedded distributor shall be included in the Connection Agreement with TBHEDI.

An embedded distributor shall enter into a Connection Agreement in a form acceptable to TBHEDI, the contents and the format of which will be at TBHEDI's discretion and be in conformity with the requirements of the Distribution System Code. Until such time as the embedded distributor executes such a Connection Agreement with TBHEDI, the embedded distributor shall be deemed to have accepted and agreed to be bound by all of the terms in these Conditions of Service that apply to such embedded distributor.

The following terms and conditions apply to the connection of an embedded distributor:

- TBHEDI shall make every reasonable effort to respond to another distributor's request for connection.
- TBHEDI 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 Estimate to Connect the distributor to TBHEDI's distribution system shall be made within ninety (90) days of receiving the written request for connection, unless the necessary information outside of TBHEDI's control is required before an Estimate can be made.

3.7.1 Connection Request

An embedded distributor shall submit its request to TBHEDI, summarizing in writing the required initial and ultimate load requirements, the required in service date and any other specific requirements.

TBHEDI will carry out an initial consultation and determine the scope and estimated cost of preparing a System Impact Study. TBHEDI will respond within thirty (30) days of receiving the embedded distributor's request.

3.7.2 System Impact Study

Upon receipt of a purchase order or equivalent from the embedded distributor, TBHEDI, in cooperation with the applicant, will study in detail all options and recommend the preferred option. The results of the study will be documented in a system impact report. This report will provide the embedded distributor with preliminary information regarding the work required to provide the requested supply, the estimated capital contribution and the expected lead time.

TBHEDI will complete the system impact study within sixty (60) days of receiving the embedded distributor's purchase order to proceed. If, despite TBHEDI's best efforts, the sixty (60) day target cannot be met, TBHEDI will notify the embedded distributor in writing and provide a new target completion date. The embedded distributor will review the system impact study and decide whether or not to proceed. To proceed the embedded distributor submits a connection application, provides all necessary information and a letter of credit with a related purchase order for the preparation of

detailed engineering specifications. The embedded distributor will submit a connection application to TBHEDI within thirty (30) days of receiving the system impact study report, failing which TBHEDI may require that a new preliminary review and system impact study be performed at the embedded distributor's cost.

3.7.3 Costs

Once the request for connection has been approved, and upon receipt of a purchase order or equivalent from the embedded distributor, TBHEDI shall prepare detailed engineering specifications for required system enhancements, obtain cost estimates for the specified work, and determine cost-sharing arrangements.

Within ninety (90) days of receiving the connection application and the accompanying material set out in section 3.7.2 above, TBHEDI will provide the Customer, in writing, a Project Description and Letter of Intent that include:

(1) a description of the work to be performed by TBHEDI;
(2) a summary of the work to be performed by the Customer;
(3) TBHEDI's capital investment in the project; and
(4) the Customer's financial contribution to the project.

If, despite TBHEDI's best efforts, the ninety (90) day target cannot be met, TBHEDI will notify the embedded distributor in writing and provide a new target completion date.

3.7.4 Contact Information

The contact information will be reviewed annually. Each Party will notify each other by November 1 of each year to confirm or update such information. If either party proposes to make a change affecting the embedded connection point, then notice of such change will be given in writing. Such notice will be given a minimum of thirty (30) days prior to any planned implementation of the change. Any change will require the approval of both Parties.

The Customer acknowledges and agrees that TBHEDI may provide any information provided by the Customer under the terms of the Standard embedded distributor Agreement to TBHEDI's representatives, provided that TBHEDI:

- provides such information to only those of TBHEDI's representatives who need to know the information; and
- has directed such representatives to use the information in accordance with the terms hereof.

3.7.5 Energy Supply

As the Host Distributor, TBHEDI reserves the right to limit the amount of energy that it agrees to supply the embedded distributor at each embedded connection/delivery point, and this amount shall be agreed upon by both Parties. The embedded distributor shall notify and include TBHEDI in any discussion, planning and interconnection design of any proposed embedded generation facility that the embedded distributor proposes to connect to its distribution system.

3.7.6 Billing

TBHEDI shall bill the embedded distributor on a regular billing cycle for the provision of distribution services by TBHEDI, and for all other applicable charges approved or authorized by the Ontario Energy Board, pursuant to TBHEDI's rate orders or any codes issued by the Ontario Energy Board.

TBHEDI shall settle non-competitive electricity services based on the rates approved by the Ontario Energy Board and by the requirements of the Retail Settlement Code. TBHEDI shall adjust the embedded distributor's usage by the applicable total loss factor for purposes of determining the embedded distributor's non-competitive electricity costs.

If the embedded distributor is not a wholesale market participant, then TBHEDI shall provide revenue metering for the settlement and monthly billing of the embedded distributor. If the embedded distributor is or becomes a wholesale market participant distributor, then the IESO shall settle the Customer's monthly energy bill.

If the embedded distributor is, or becomes, a wholesale market participant distributor registered with the IESO, the embedded distributor will be responsible for the wholesale metering installation(s) metering data as per the IESO Market Rules.

3.7.7 Ownership

All TBHEDI-owned equipment, including the revenue metering equipment and instrument transformers, shall continue to be vested in TBHEDI, unless the Parties have specified otherwise in the embedded distributor agreement.

All Customer equipment and facilities shall continue to be vested in the Customer, unless the Parties have specified otherwise in the embedded distributor agreement.

3.7.8 Assignment of Responsibility

The electrical distribution systems shall be under the operating control of a controlling authority at all times.

The responsibility for regular maintenance of equipment rests with the owner. TBHEDI and the embedded distributor shall ensure that only qualified persons perform the operation and maintenance of their respective electrical distribution systems.

Each Party shall be responsible for maintenance, protection and power quality of each Party's portion of the shared distribution feeder that each Party owns. Each Party shall ensure that its portion of the feeder has proper fault protection and voltage within proper limits.

TBHEDI and the Customer shall maintain their respective equipment in efficient condition with proper devices, according to electrical distribution utility standards. If, in the opinion of TBHEDI or the Customer, maintenance is not properly performed, the identifying Party will notify the other in writing.

3.7.9 Normal Operations

Controlling authorities will inform each other at least seven (7) calendar days in advance of any planned work which would have an effect on the other Party's electrical distribution system.

Applications for work involving load interruptions shall be initiated at least ten (10) calendar days in advance, to permit proper notification of other customers who would be interrupted.

Each controlling authority is responsible for establishing the appropriate conditions for, and the co-ordination of, switching on the equipment under its control.

The controlling authority for the equipment under its control shall issue work protection on the equipment when work is done on that equipment. Each controlling authority is responsible for establishing, in accordance with industry standards, a safe work environment for their forces while carrying out planned or emergency maintenance. Each Party is responsible for providing isolation at devices under their operating control to assist the other Party.

3.7.10 Communication

Communications between controlling authorities must be readily available to deal with routine and unforeseen system conditions. Each party must identify the controlling authority for communications.

The controlling authority of each Party agrees to communicate for the following reasons:

For normal operating communications with regard to outage planning, work protection and switching, etc.:

- provide each other with information relative to prearranged outages, power interruptions or system problems which materially affect the supply of power to each other's distribution system;
- provide each other with information relative to feeder trips or re-closure operations caused by equipment under each Parties ownership or control;
- following a lock-out, TBHEDI's Controlling Authority will not authorize the Hydro One Controlling Authority to re-energize a feeder owned by TBHEDI to which the embedded distributor is connected until contact has been made with the embedded distributor's Controlling Authority;
- when a permanent fault occurs on a feeder which supplies TBHEDI and an embedded distributor load, the TBHEDI Controlling Authority will notify the embedded distributor's Controlling Authority during regular working hours, and the embedded distributor's designated person on call for after-hours permanent faults. Once communication is established and the location of the fault is not known, TBHEDI and/or embedded distributor staff will be dispatched to patrol their systems, and may assist each other in sectionalizing the faulted feeder.

If TBHEDI and the embedded distributor each own portions of, and share, a common feeder, both Parties agree to provide each other with the following information:

- TBHEDI shall provide the embedded distributor with fault current information and protection settings of upstream protective devices;

- the embedded distributor shall provide TBHEDI with load forecasting information;
- TBHEDI and the embedded distributor agree to maintain phase balance within generally acceptable industry standards;
- TBHEDI and the embedded distributor agree to adhere to generally acceptable standards pertaining to power quality and voltage levels on the section of feeder each Party owns; and
- TBHEDI and the embedded distributor agree to provide each other, on request, with maintenance schedules and records on the section of feeder each party owns.

3.7.11 Emergency Operations

Each Party will co-operate fully in cases of emergency in order to facilitate restoration of the system back to normal, and to permit the commencement of possible repairs.

On the request of one Party's Controlling Authority, the other Party's Controlling Authority, staff or agents, will provide the required timely isolation of equipment as required for emergency switching, or to establish a "Condition Guarantee".

3.7.12 Metering and Fault Protection

TBHEDI agrees to deliver electricity to the embedded distributor's distribution system through an interval meter for settlement purposes.

If the embedded distributor is, or becomes, a wholesale market participant distributor registered with the IESO, the Customer will be responsible for the wholesale metering installation(s) metering data as per the IESO Market Rules. TBHEDI shall have read-only access to such wholesale metering installations.

The Parties shall act at all times in accordance with the Distribution System Code, for situations where TBHEDI or the embedded distributor provides distribution services through a load transfer.

TBHEDI and the embedded distributor shall each manage its own portion of a supply feeder, and ensure that its portion of the feeder has proper fault protection and voltage within proper limits in accordance with industry standards.

The owner of the feeder breaker would be responsible for maintaining appropriate relay settings for overall feeder protection, and both TBHEDI and the embedded distributor would be responsible to provide the required information to accomplish this.

3.7.13 Security

The amount of security that the embedded distributor will have to provide to TBHEDI shall be an amount equal to 2.0 times TBHEDI's estimate of the embedded distributor's average monthly bill, or an average one-month billing if enrolled in the pre-authorized payment plan, for all supply points listed in the standard agreement.

The security to be provided by the embedded distributor shall be any one or a combination of the following types of security: irrevocable standby letter of credit or cash deposit. If the embedded distributor provides an irrevocable standby letter of credit as

security, the embedded distributor and TBHEDI agree that the irrevocable standby letter of credit will be automatically renewed unless the embedded distributor provides notification in writing ninety (90) days prior to the termination date.

Interest on cash Security Deposits will be calculated in accordance with Section 2.4.3 of these Conditions of Service.

3.7.14 Liability

TBHEDI shall only be liable to the embedded distributor, and the embedded distributor shall only be liable to TBHEDI, for any damages which arise directly out of the willful misconduct or negligence:

- of TBHEDI in providing distribution services to the embedded distributor;
- of the embedded distributor in being connected to TBHEDI's distribution system; or
- of TBHEDI or the embedded distributor in meeting their respective obligations under the Distribution System Code, their licenses, and any other applicable law.

The embedded distributor agrees to take out liability insurance in the amount of $5,000,000, or from time to time such other amount as may be determined by TBHEDI in its sole discretion, to which the City of Thunder Bay and TBHEDI are added as additional named insured, and to provide proof of such insurance.

Despite the above, neither TBHEDI nor the embedded distributor shall be liable under any circumstances whatsoever for any 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 notwithstanding the embedded distributor's financial contribution as per Section 3.7.3. of these Conditions of Service.

3.7.15 Force Majeure

Subject to the items below, neither Party shall be held to have committed an event of default in respect of any obligation under the embedded distributor agreement if prevented from performing that obligation, in whole or in part, because of a force majeure event.

If a force majeure event prevents a Party from performing any of its obligations under the Distribution System Code and the embedded distributor agreement, that Party shall:

- promptly notify the other Party of the force majeure event and its assessment, in good faith, of the effect that the event will have on its ability to perform any of its obligations. If the immediate notice is not in writing, it shall be confirmed in writing as soon as reasonably practicable;
- not be entitled to suspend performance of any of its obligations under the embedded distributor Agreement to any greater extent, or for any longer time, than the force majeure event requires it to do;
- use its best efforts to mitigate the effects of the force majeure event, remedy its inability to perform, and resume full performance of its obligations;
- keep the other Party continually informed of its efforts; and

- provide written notice to the other Party when it resumes performance of any obligations affected by the force majeure event.

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

3.8 Unmetered Connections

The number of connections and the load details of an unmetered service will be agreed upon jointly by Thunder Bay Hydro and the Customer, based on detailed manufacturer documentation or periodic monitoring of actual consumption. It is the Customer's responsibility to submit accurate and up to date information to Thunder Bay Hydro when changes become known or as requested by Thunder Bay Hydro.

Customer requests for changes to their unmetered load data will be initiated by contacting Thunder Bay Hydro's Customer Service Department. The Customer shall provide the necessary evidence and documentation to substantiate changes (e.g., electrical demand, hours of operation) in the form of technical information and proof of purchase to validate the information provided. At its sole discretion, Thunder Bay Hydro reserves the right to review all unmetered cases and may request a load study or a meter installation at the Customers expense.

During the review of information, Thunder Bay Hydro may contact the customer for outstanding items prior to updating the load data on file. Once final approval of information is complete an update of customer's information will be processed by the Billing Group, and notification will be given to the Customer prior to billing. The Customer will be billed using the Ontario Energy Board approved rates. Thunder Bay Hydro will endeavor to communicate potential changes to its unmetered load customers either through direct communication, (e.g., phone, email or in person contact with Thunder Bay Hydro personnel), through informational mailings (e.g., bill inserts), or through information provided on Thunder Bay Hydro's website.

Thunder Bay Hydro is not in the practice of connecting new unmetered load services, and will endeavor to meter all new customers.

3.8.1 Street Lighting

Unless agreed to by both Parties, roadway lighting such as in the City of Thunder Bay and on Fort William First Nation land shall be controlled by photo cells. The daily consumption for these Customers shall be based on the calculated connected loads times the required night time or lighting times established in the approved OEB street lighting load shape template.

Attachment of street lighting equipment to TBHEDI's electrical distribution system and the electrical supply to street lighting equipment is subject to approval by TBHEDI.

Street lighting plant, facilities, or equipment owned by the Customer are subject to the ESA requirements.

Actual costs related to the connection of street lighting will be recovered from the Customer.

3.8.2 Traffic Signals and Pedestrian X-Walk Signals/Beacons

Traffic signals and pedestrian X-walk signals/beacons shall have a rate structure equal to General Service (< 50 kW) Class Customers, as approved by the OEB. The service will be unmetered. Energy consumption will be based on connected wattage information submitted by the Customer and calculated as per hours of use. It is the responsibility of the Customer to report to TBHEDI in writing a change of consumption to the installation.

Each traffic signal and pedestrian X-walk signal/beacon location is reviewed individually and is connected to TBHEDI's low voltage distribution system. Electrical Safety Authority (ESA) "Authorization to Connect" is required prior to connecting the service.

Service conductors will be supplied by the Customer.

TBHEDI will advise the Customer of the service connection point.

Where transformation does not exist, it will be provided as part of the Variable Connection Charge. A capital contribution will be required.

The Ownership Demarcation point is as follows:

- for overhead - the top of the Customer's service standpipe/mast;
- for underground – the line-side of the fuse in the first handwell, tap box, junction box, transformer (as applicable) beyond TBHEDI's plant.

Connection assets will be recovered through a Variable Connection Charge, based on actual costs.

Re-design and inspection services are 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, Signs (< 5kW) and Miscellaneous Unmetered Loads (< 5kW)

This section pertains to the supply of electrical energy for bus shelters, telephone booths, cable TV amplifiers and similar small unmetered loads.

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

An "Authorization to Connect" from the ESA is required prior to connecting the service.

3.8.4 Decorative Lighting and Tree Lighting Services

a) Decorative or Tree Lighting, if connected to the City of Thunder Bay system will be treated as a Street Lighting Class of service. Please refer to Section 3.8.1 of these Conditions of Service for applicable Terms and Conditions and rate structure.
b) Decorative or Tree Lighting connected to TBHEDI's distribution system shall have a rate structure as General Service (Under 50 kW) Class Customers. Refer to the Schedule of Rates.

i. **For unmetered service installations**, refer to Section 3.8.2 titled Traffic Signals and Pedestrian X-Walk Signals/Beacons for applicable Terms and Conditions.
ii. **For metered service installations**, refer to 3.2 General Service (Under 50 kW) for applicable Terms and Conditions.

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.

An ESA "Authorization to Connect" is required prior to connecting the service.

3.8.5 Sign Boards

Sign boards must be supplied from Customer's service at the site, unless no service exists. The conditions of connection and supply of an unmetered service will be by TBHEDI Power Systems Division.

SECTION 4: GLOSSARY OF TERMS

Sources of definitions from applicable Acts & Codes:

DSC	Distribution System Code
EA	Electricity Act, 1998, Schedule A, section 2
MR	Market Rules for the Ontario Electricity Market, Chapter 11
RSC	Retail Settlement Code
SSS	Standard Supply Service Code
TDL	Transitional Distribution License, Part 1
TTL	Transitional Transmission License, Part 1

"Act" means the *Electricity Act, 1998,* Schedule A, Section 2, 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; (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) "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 TBHEDI under which electrical service is requested;

"basic service" means a service that is recovered through revenue requirements and does not require a variable connection charge. TBHEDI shall define a basic connection for each Customer to include a share of distribution transformation capacity and 31 m of overhead conductor or an equivalent credit for underground services;

"billing demand" means the greater of measurement in kilowatts (kW) or 90% of kVA of the maximum rate at which electricity is consumed during a billing period.

"Board" means the Ontario Energy Board; (EA, TDL, DSC)

"Board of Directors" means the TBHEDI Board of Directors;

"building" means a building, portion of a building, structure or facility;

"circuit breaker" means a device designed to open and close a circuit by non-automatic means and to open the circuit automatically on a predetermined overcurrent without damage to itself when properly applied within its ratings;

“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; (EA, 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 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)

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

“device” means any operating or non-operating mechanical connection or attachment;

“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; (EA, MR, TDL, DSC)

“distribution services” means services related to the distribution of electricity and the services the Board has required distributors to carry out, for which a charge or rate has been approved by the Board under section 78 of the Act. (RSC, DSC, TDL)

“distribution system loss factor” means a factor(s) 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 system 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, RSC)

“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; (EA, 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 a distributor with respect to the services and terms of service to be offered to Customers and retailers and provides minimum technical operating standards of distribution systems; (TDL, DSC)
“distributor” means a person who owns or operates a distribution system; (EA, 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)

MR, EDL“Electrical Safety Authority” or “ESA” means the person or body designated under the *Electricity Act* regulations as the Electrical Safety Authority; (DSC)

“electrical service” means the Customer’s conductors and equipment for delivery of energy from TBHEDI’

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

“Embedded Generator” or “embedded generation facility” means a generation facility which is not directly connected to the IESO-controlled grid but instead is connected to a distribution system, and has the extended meaning given to it in section 9 of the DSC; (DSC, RSC)

“embedded retail generator” means a customer that (a) is not a wholesale market participant or a net metered generator (as defined in section 6.7.1 or the DSC), (b) owns or operates an embedded generation facility, other than an emergency backup generation facility; and (c) sells output from the embedded generation facility to the Independent Electricity System Operator under contract or to a distributor; (DSC, RSC)

“embedded wholesale Consumer” is a generator 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)

“embedded wholesale generator” is a generator who is a wholesale market participant and whose generation facility is connected to the distribution system (RSC);

“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) In addition to the electrical context of emergency, emergency also included prevention of loss of life or property;

“emergency backup” 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 reading, tap off load(s) before the 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, but does not include a renewable enabling improvement; (DSC)

“expansion” means a modification or addition to the main 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, and includes the modifications or additions to the main distribution system identified in section 3.2.30 but in respect of a renewable energy generation facility excludes a renewable enabling improvement; (DSC)

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

“Force Majeure” means any events or causes beyond the reasonable control of TBHEDI which prevent TBHEDI from the ability to perform any of its obligations under these Conditions of Service 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, lockout, labour dispute, restraint by court order or public authority, or action or non-action by or inability to obtain authorization or approval from any government authority, or any combination of these causes;

“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, Larger User, or Municipal Street Lighting. This

includes multi-unit residential establishments such as apartment 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; (DSC, TDL, EA)

“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; (EA, MR, TDL, DSC)

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

“geographic distributor” with respect to 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 judgment in light of the facts known at the time the decision was made, could have been expected to accomplish the desired result at a reasonable cost consistent with good practices, reliability, safety and expedition. Good utility practice is not intended to be limited to the optimum practice, method, or act to the exclusion of all others, but rather to be acceptable practices, methods, or acts generally accepted in North America; (MR, DSC)

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

“host distributor” means the 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);

“IEC” means International Electrotechnical Commission;

“IEEE” means Institute of Electrical and Electronics Engineers;

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

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

“interval meter” means a meter that measures and records electricity use on an hourly or sub-hourly basis; (RSC, 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 transfer” means a network supply point of one distributor that is supplied through the distribution network of another distributor and where this supply point in 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 TBHEDI incoming cables, bus duct, disconnecting and protective equipment for a Building or from which all other metered sub-services are taken;

“maintenance” means any inspection, testing, cleaning, torqueing, adjusting, and calibrating electrical equipment, or replace support structures associated with the electrical system but no electrical betterments;

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

“Market Rules” means the rules made under section 32 of the *Electricity Act; 1998* (MR, TDL, DSC, RSC)

“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)

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

“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) these must be connected to a telephone line for remote reading of the meter.

“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);

“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)

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

“power factor” means a variable equal to the ratio of kW and kVA demand (RSC);

“primary service” means any service which is supplied with a nominal voltage greater than 750 V;

“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)

“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 product 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 supplied to single-family dwelling units that are for domestic or household purposes, including seasonal occupancy. At TBHEDI’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 (EA, 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 Customers and provides for tracking and facilitating Customer transfers among competitive retailers; (TDL, DSC, RSC)

“retailer” means a person who retails electricity; (EA, MR, TDL, DSC)

“secondary service” means any service which is supplied with nominal voltage less than 750 volts;

“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 Retailer 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; (EA, TDL, DSC)

“service date” means the date that the Customer and TBHEDI mutually agree upon the permanent energization by TBHEDI for billing purposes;

“Standard Supply Service Code (SSS)” means the code issued by the Board and in effect at the relevant time, which, among other things, establishes the manner in which a distributor must meet in carrying out its obligations to sell electricity under section 29 of the *Electricity Act, 1998*; (RSC, TDL)

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

“supply point” means the Customer connection point, for both primary and secondary services, to the TBHEDI distribution system. This might be located at a manhole, stub-up, vault, pole, or padmounted device. This electrical supply location might be located on an adjacent property from which TBHEDI has land access rights. With respect to an embedded generator, “supply point” means the connection point where electricity produced by the generator is injected into a distribution system. In all cases, the final supply point will be designated by TBHEDI;

“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);

“support structure” means any equipment that physically supports and routes the distribution system between the substation and the Customer. This would include poles, overhead platforms, towers, anchors, guy wires, lashing messengers, manholes, handholes, transformer & switch bases, and ducts;

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

“termination pole” refers to the TBHEDI distribution pole on which the service supply cables are terminated;

“transformer vault” means an isolated enclosure built to applicable codes to house transformers and associated electrical equipment;

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

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

“wholesale settlement cost” means costs for both competitive and non-competitive services billed to a distributor by the IESO or a host distributor, or provided by an embedded retail generator or by a neighboring distributor; (RSC)

SECTION 5: APPENDICES

Appendix A	**Security Deposit Policy**
Appendix B	**Distribution System Code Appendix B- Economic Evaluation Model for Distribution System Expansion**
Appendix C	**Terms of Agreement for Electrical Service**
Appendix D	**Demarcation Points and Charges**
Appendix F	**Metering Requirements**

APPENDIX A

Security Deposit Policy

Thunder Bay Hydro Electricity Distribution Inc. Security Deposit Policy

Effective October 1, 2010

This policy is available to all TBHEDI Consumers, hereinafter known as the Customer, for their inspection upon request.

TBHEDI will require the customer to pay any new, replacement or increase in Security Deposit amount(s) in the manner and time period defined by the rules of the Distribution System Code.

All applicants for electrical service will complete a customer information form or provide personal information (with their authorized consent) for the purpose of collecting information.

Based on this information, TBHEDI, an electricity distributor, will request an Account Security Deposit from all applicants who are unable to demonstrate a "good payment history" - as defined by the Ontario Energy Board's Distribution System Code

TBHEDI shall not require a Security Deposit where:

The Customer has a "good payment history" of:

- **1 year** - in the case of a residential customer (RS),
- **5 years** - in the case of a non-residential customer in a <50 kW demand rate class (GU) or,
- **7 years** - in the case of a non-residential customer in any other rate class (all *commercial classes other than* GU)
- The Customer provides a letter from another Electricity Distributor, or Gas Distributor, in Canada confirming a "good payment history" with that Distributor for the most recent relevant time period set above where some of the time period which makes up the good payment history has occurred in the previous 24 months, or
- The Customer, other than a customer in a >5000 kW demand rate class, provides a satisfactory credit check made at the Customer's expense from a Credit company such as Equifax, TransUnion or Dun & Bradstreet.

The time period that makes up the "good payment history" must be the most recent period of time (*as listed above*) and some of that time period must have occurred within the previous two (2) years.

TBHEDI shall require a Security Deposit where:

The Customer is no longer deemed to have a "good payment history". This occurs when during the relevant time period listed above, any of the following has occurred:

- the Customer has received more than one disconnection notice from a Distributor,
- more than one cheque given to a Distributor, by the Customer, has been returned for insufficient funds,
- more than one pre-authorized payment to a Distributor has been returned for insufficient funds
- a collection trip or disconnect trip by a Distributor has occurred.

If any of these events (*listed above*) occur due to an error by TBHEDI, the Customer's "good payment history" will not be affected.

Calculation of Security Deposit Amounts:

The maximum amount of a Security Deposit which TBHEDI may require a Customer to pay shall be calculated, and billed for, in the following manner:

A billing cycle factor x the estimated bill, based on the Customer's average load with TBHEDI during the most recent twelve (12) consecutive months and within the past two (2) years.

"ALL" TBHEDI Residential Service (RS) Customers:

A bi-monthly billing cycle factor of **1.75** x estimated bimonthly bill - based on the Customer's average monthly load at the service location.

"New" TBHEDI Commercial Service Customers:

A monthly billing cycle factor of **2.5** x estimated monthly bill - based on the Customer's average monthly load at the service location.

TBHEDI Commercial Service Customers not demonstrating a "Good Payment History"

A monthly billing cycle factor of **2.5** x estimated monthly bill - based on the Customer's highest monthly load * at the service location.

** Where a Commercial Customer has a payment history which discloses more than one disconnection notice in the relevant time period shown above, TBHEDI may use that Customer's highest (actual or estimated) monthly load for the most recent twelve (12) consecutive months within the past two (2) years for the purposes of making the recalculation of the maximum amount of Security Deposit.*

Where relevant usage information is not available for the Customer for twelve (12) consecutive months within the past two years, the Customer's average monthly load shall be based on a reasonable estimate made by TBHEDI as defined in the Distribution System Code.

Where a non-residential Customer, in a >50 kW demand rate class, provides a credit rating from a recognized rating agency, the maximum amount of a Security Deposit, which the Distributor may require from the Customer to pay, will be reduced in accordance to the table in section 2.4.13 of the Distribution System Code.

Acceptable Forms of Payment for Security Deposit:

TBHEDI shall permit the Customer to provide a Security Deposit in equal installments paid over the time period allowed by the Distribution System Code. A Customer may, at their discretion, choose to pay the Security Deposit over a shorter time period and by the following:

- Cash, Certified Cheque(s), Money Order(s) - which may be made in installments.
- Personal / Business Cheque(s) - subject to credit approval by TBHEDI.
- An Automatically Renewing, Irrevocable Letter of Credit from a Chartered Canadian Bank or Credit Union.
- Government of Canada or Ontario Bearer Bonds.
- Band Council Resolution Guarantee.

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

Non-Payment of a Security Deposit

If TBHEDI has requested an account Security Deposit and the Customer fails to render payment and/or equal installments are not maintained, a ”collection trip” or “service disconnection” may be required. This is a visit to a Customer’s premises by an employee, or agent of TBHEDI, to demand payment of an outstanding amount or to shut off, or limit, the distribution of electricity. The Customer will also be subject to a collection charge if a visit is made or service reconnection fees upon restoration of service.

Where a Customer’s service is subject to service disconnection, TBHEDI will conduct a review of the Customer’s payment history (as defined in this policy) to determine if a Security Deposit is required, to be applied and replaced, or increased.

TBHEDI may use any risk mitigation options available under law to manage customer non-payment risk. TBHEDI will not discriminate among customers with similar risk profiles or risk related factors except where expressly permitted under the Distribution System Code.

Reviews and Refunds of Security Deposits:

TBHEDI shall review every Customer’s Security Deposit, in the calendar year in which the anniversary date of their first payment occurs, to determine whether the entire or a partial amount of the Security Deposit is to be returned to the Customer or if an increase is required.

Based on this review:

- If the amount of the Security Deposit is to be increased based on a re-calculation of the amount of the Security Deposit, TBHEDI will require the customer to pay

any additional amount(s) in the manner and time period defined by the rules of the Distribution System Code.

- If some or all of the Security Deposit is to be returned to the Customer, TBHEDI shall promptly return this amount to the Customer by crediting the Customer's account or by other methods as determined by TBHEDI.

- Where a Customer in a > 5000 kW demand rate class is in a position that it would be exempt from paying a Security Deposit, TBHEDI is only required to return 50% of the held Security Deposit.

A Customer may request, no earlier than twelve (12) months after the first payment of a Security Deposit that TBHEDI undertake a review to determine whether the entire or partial amount of the Security Deposit is to be returned to the Customer.
Interest shall accrue monthly on Security Deposits commencing on receipt of the total deposit required by TBHEDI. The interest rate shall be at the Prime Business Rate as determined by the Bank of Canada less two (2) percent, updated quarterly. The interest accrued shall be paid out at least once every twelve (12) months, or on return of the Security Deposit, or closure of the account, whichever comes first. This interest may be paid by crediting the account of the Customer or by other methods as determined by TBHEDI.

TBHEDI shall promptly return any Security Deposit received from the Customer upon closure of the Customer's account, subject to TBHEDI's right to use the Security Deposit, plus applicable interest, to set off any amounts owing by the Customer to TBHEDI. The Security Deposit or remaining credit balance shall be returned within six (6) weeks of the closure of an account.

APPENDIX B

Distribution System Code – Appendix B
Economic Evaluation Model for Distribution System Expansion

Last Revised October 21, 2009

APPENDIX B –
METHODOLOGY AND ASSUMPTIONS FOR AN ESTIMATE TO CONNECT ECONOMIC EVALUATION

B.1 COMMON ELEMENTS OF THE DISCOUNTED CASH FLOW MODEL

To achieve consistent business principles for the development of the elements of an Economic Evaluation model, the following parameters for the approach are to be followed by all distributors.

The discounted cash flow (DCF) calculation for individual projects will be based on a set of common elements and related assumptions listed below.

Revenue Forecasting

The common elements for any project will be as follows:

(a) Total forecasted customer additions over the Customer Connection Horizon, by class as specified below;
(b) Customer Revenue Horizon as specified below;
(c) Estimate of average energy and demand per added customer (by project) which reflects the mix of customers to be added - for various classes of customers; this should be carried out by class;
(d) Customer additions, as reflected in the model for each year of the Customer Connection Horizon; and
(e) Rates from the approved rate schedules for the particular distributor reflecting the distribution (wires only) rates.

Capital Costs

Common elements will be as follows:

(a) An estimate of all capital costs directly associated with the expansion to allow forecast customer additions.

(b) For expansions to the distribution system, costs of the following elements, where applicable, should be included:
- distribution stations;
- distribution lines;
- distribution transformers;
- secondary busses;

- services; and
- land and land rights.

Note that the "Ownership Demarcation Point" as specified in the distributor's Condition of Service would define the point of separation between a customers' facilities and distributor's facilities.

(c) Estimate of incremental overheads applicable to distribution system expansion;
(d) A per kilowatt enhancement cost estimate – the per kilowatt enhancement cost estimate shall be set annually and shall be based on a historical three to five year rolling average of actual enhancement costs incurred in system expansions;
(d.1) paragraph (d) shall cease to apply to a distributor as the date on which the distributor's rates are set based on a cost of service allocation for the first time following the 2010 rate year;
(e) For residential customers, the amount the cost of the basic connection referred to in section 3.1.4 of the Code;
(f) For non-residential customers, if the distributor has chosen to recover the non-residential basic connection charge as part of its revenue requirement, a description of, and the amount for, the connection charges referred to in section 3.1.5 of the Code that have been factored into the economic evaluation.

Expense Forecasting

Common elements will be as follows:

(a) Attributable incremental operating and maintenance expenditures - any incremental attributable costs directly associated with the addition of new customers to the system would be included in the operating and maintenance expenditures.
(b) Income and capital taxes based on tax rates underpinning the existing rate schedules.
(c) Municipal property taxes based on projected levels.

APPENDIX B –
METHODOLOGY AND ASSUMPTIONS FOR AN ESTIMATE TO CONNECT ECONOMIC EVALUATION

Specific Parameters/Assumptions

Specific parameters of the common elements include the following:

(a) A maximum customer connection horizon of five (5) years, calculated from the energization date of the facilities. [1]

(b) A maximum customer revenue horizon of twenty five (25) years, calculated from the in service date of the new customers. [2]

(c) A discount rate equal to the incremental after-tax cost of capital, based on the prospective capital mix, debt and preference share cost rates, and the latest approved rate of return on common equity.

(d) Discounting to reflect the true timing of expenditures. Up-front capital expenditures will be discounted at the beginning of the project year and capital expended throughout the year will be mid-year discounted. The same approach to discounting will be used for revenues and operating and maintenance expenditures. [3]

APPENDIX B –
METHODOLOGY AND ASSUMPTIONS FOR AN ESTIMATE TO CONNECT ECONOMIC EVALUATION

B.2 DISCOUNTED CASH FLOW (DCF) METHODOLOGY

Net Present Value ("NPV")	=	Present Value ("PV") of Operating Cash Flow + PV of CCA Tax Shield - PV of Capital
1. PV of Operating Cash Flow	=	P V of Net Operating Cash (before taxes) - P V of Taxes
a) PV of Net Operating Cash	=	PV of Net Operating Cash Discounted at the Company's discount rate for the customer revenue horizon. Mid-year discounting is applied. Incremental after tax weighted average cost of capital will be used in discounting.
Net (Wires)	=	(Annual(Wires) Revenues - Annual (Wires) O&M)

[1] For customer connection periods of greater than 5 years an explanation of the extension of the period will be provided to the Board

[2] For example, that the revenue horizon for customers connected in year 1, is 25 years while for those connected in year 3, the revenue horizon is 22 years.

[3] For certain projects Capital Expenditures may be staged and can occur in any year of the five-year Connection Horizon.

Operating Cash

Annual (Wires) Revenue	=	Customer Additions * [Appropriate (Wires) Rates * Rate Determinant]
Annual (Wires) O&M	=	Customer Additions * Annual Marginal (Wires) O&M Cost/customer
b) PV of Taxes	=	PV of Municipal Taxes + PV of Capital Taxes + PV of Income Taxes (before Interest tax shield)
Annual Municipal Tax	=	Municipal Tax Rate * (Total Capital Cost)
Total Capital Cost	=	Distribution Capital Investment + Customer Related Investment + overheads at the project level
Annual Capital Taxes	=	(Capital Tax Rate) * (Closing Undepreciated Capital Cost Balance)
Annual Capital Tax	=	(Capital Tax Rate) * (Net Operating Cash - Annual Municipal Tax B Annual Capital Tax)

The Capital Tax Rate is a combination of the Provincial Capital Tax Rate and the Large Corporation Tax (Grossed up for income tax effect where appropriate).

Note: Above is discounted, using mid-year discounting, over the customer revenue horizon.

2. PV of Capital	=	P V of Total Annual Capital Expenditures

a) PV of Total Annual Capital Expenditures

Total Annual Capital Expenditures over the customer's revenue horizon discounted to time zero

Total Annual Capital Expenditure	=	(for New Facilities and/or Reinforcement Investments + Customer Specific Capital + Overheads at the project level). This applies for implicated system elements at the utility side of the Ownership Demarcation Line."

Note: Above is discounted to the beginning of year one over the customer addition horizon

3. PV of CCA Tax Shield

P V of the CCA Tax Shield on [Total Annual Capital]

The PV of the perpetual tax shield may be calculated as:

PV at time zero of: $\frac{[(\text{Income tax Rate}) * (\text{CCA Rate}) * \text{Annual Total Capital}]}{(\text{CCA Rate} + \text{Discount Rate})}$

or,
Calculated annually and present valued in the PV of Taxes calculation.

Note: An adjustment is added to account for the ½ year CCA rule.

4. Discount Rate

PV is calculated with an incremental, after-tax discount rate.

APPENDIX C

Terms of Agreement for Electrical Service

CUSTOMER IDENTIFICATION NUMBER: _____

AGREEMENT AND APPLICATION FOR THE SERVICE & SUPPLY OF ELECTRICAL ENERGY between
TBHEDI ELECTRICITY DISTRIBUTION INC. - hereinafter known as TBHEDI
and THE UNDERSIGNED - hereinafter known as the CONSUMER

Consumer's Full / Last Name: _____
(please print)

First Name: _____ *(print, if applicable)*

Middle Name: _____ *(print, if applicable)*

The Undersigned hereby requests TBHEDI to supply Electrical Energy to the Consumer at the Service Location / Locations requested by the Consumer. This application will also include all rental equipment, owned by TBHEDI, at the requested Location (s).

This application when signed by the Consumer and Executed by the signature of a proper Officer of TBHEDI shall be a contract between the Consumer and TBHEDI. The Consumer and TBHEDI agree to comply with the "Terms of Agreement" and agree that the said "Terms of Agreement" are part of this Contract. The Consumer also agrees to review TBHEDI's "Conditions of Service" which are also part of this contract - copies are available upon request and/or located on our website **www.tbhydro.com**.

The Consumer further agrees to pay TBHEDI the applicable rates and charges as approved by the Ontario Energy Board.

Witnessed: _____ *Consumer:* _____

Accepted and Signed for TBHEDI: *Signature:* _____

By: _____ *Title / Position:* _____

Date: _____ *Date of Application:* _____

CONSENT FORM for NEW TBHEDI CUSTOMERS

TBHEDI is pleased to be your provider of electricity distribution services. To provide you with a reliable source of electricity, TBHEDI needs to collect and use certain personal information about you. As of January 1, 2004, federal legislation protecting your privacy requires that TBHEDI obtain your written consent to collect, use and disclose your personal information for identified purposes. We invite you to read this notice carefully to understand our policies and practices with respect to personal information.

The nature of personal information we collect may include:

- Information we receive from you such as your name, address, contact information and general financial, credit and reference information;
- Facts about your historical and current consumption of power;
- Information about your transactions with us, such as meter number, account number, account balances, payment history, and account activity;
- Identifying information, such as a driver's license.

TBHEDI uses the information we collect for the following purposes:

- To provide you with continuous electric service and to bill you for that service;
- To assist us in the collection of accounts;
- To respond to your inquiries about energy use and billing;
- To prevent fraud with respect to both you and our company;
- To meet legal and regulatory requirements.

Because of the structure of the electricity sector in Ontario, it may be necessary to share your billing and consumption information with third party billing and settlement agencies. For example, your billing and consumption information may be provided to a retailer with whom you have chosen to enter into a separate contract. Your information may also be shared or disclosed to other agencies or organizations as required by law or regulation.

We have developed and implemented a Corporate Privacy Policy/Code for maintaining the confidentiality and security of your personal information. At any time, you have the right to request access to your personal information which we have collected and to request amendments to personal information about you to ensure its accuracy and completeness. To make a request for access to personal information we may have collected, disclosed or used about you, or to request that your personal information be amended, please contact our **Chief Privacy Officer, Human Resources & Safety**.

I have read and understood this statement of TBHEDI regarding the collection, use and disclosure of my personal information, and I hereby consent to have TBHEDI collect and use my personal information for the purposes stated above.

Dated: _____ Name *(please print):*
_____

Signed:
_____
_____

TERMS OF AGREEMENT

1. The Consumer agrees to use the energy only for the purpose for which it was connected and releases TBHEDI from all claims for damage resulting from the use of electrical energy.

2. The Consumer agrees to pay for all the energy used and for all the other charges directly related to the continued supply of electrical energy, at the applicable rates, charges and billing due date as regulated and approved by the Ontario Energy Board. A late payment charge in accordance with the approved rate schedule shall apply to all accounts not paid to TBHEDI on or before the due date.

3. This Agreement shall not be binding until the Consumer's application is accepted by TBHEDI and the application is executed by the signature of the appropriate Senior Manager or such other officers as he/she may designate for that purpose. Acceptance is conditional upon the information in the Credit Information Form / File being materially correct. This agreement shall not be modified or affected by any promise, agreement or representation of any agent or employee of the TBHEDI unless same is in writing and made part of this Agreement.

4. This Agreement shall continue in force from the date on which the service is connected and thereafter until terminated by at least five working days' notice, in writing, given by either party to the other.

5. Notwithstanding the provisions of Clause 4, TBHEDI reserves the right to limit or discontinue the supply of energy without notice for repairs, want of supply, insolvency of the Consumer, or infraction of any rules established by TBHEDI. TBHEDI also reserves the right to limit or discontinue the supply of energy for non-payment of account subject to the rules and regulations set forth by the Ontario Energy Board.

6. The Consumer consents to having TBHEDI, or its agents, seek and obtain personal or financial information for the purpose of granting credit or recovering amounts due to TBHEDI.

7. In accordance with TBHEDI's Security Deposit Policy, if an account Security Deposit is required, increased, or replaced - the Consumer agrees to pay the Security Deposit in the amount as determined by this policy. The Consumer acknowledges and agrees that the payment of the Security Deposit is a condition precedent to TBHEDI's acceptance of the Consumer's application, and to TBHEDI's supply of electrical energy, services and goods to the Consumer. TBHEDI also reserves the right to limit or discontinue the supply of energy for non-payment of Security Deposit subject to the rules and regulations set forth by the Ontario Energy Board.

8. In the event that the Agreement is terminated pursuant to Clause 4 or whenever default is made in giving security as required by Clause 7, the Consumer hereby authorizes TBHEDI, at its option, to enter onto the Consumer's premises and remove therefrom, meters, lines, equipment and appliances installed thereon by TBHEDI.

9. The Consumer agrees to provide space free of charge or rent in the Consumer's premises for the meters and any other equipment of TBHEDI all of which shall be in the care and at the risk of the Consumer. If this equipment is destroyed or damaged by fire, or any cause whatsoever, other than ordinary wear and tear, the Consumer shall be liable to pay TBHEDI the value of such meters and any other equipment, or the cost of repairing or replacing the same. The properly authorized agents of TBHEDI shall, at all reasonable hours, have the right to read, inspect, replace and remove any of the said equipment or to install any further equipment or apparatus which TBHEDI deems necessary and have free access for this purpose to the said premises.

10. If a meter in any month ceases to register or has registered incorrectly, the Consumer shall pay for the energy supplied during such a month a reasonable sum based on the reading of any meter formerly or subsequently installed on the premises, with due regard being given to any change in the character of the installation and/or demand.

11. TBHEDI, from time to time, may make tests to determine the electrical characteristics of the Consumer's load and may install and use meters and equipment that it deems necessary.

12. The signature of the parties hereto shall be binding upon their successors or assigns and that, subject to the fulfillment of their requirements of Clause 4, the vacating of the premises herein named shall not release the Consumer from this Agreement except at the option, and by written consent, of TBHEDI.

13. In the event of a Consumer who has notified TBHEDI to disconnect service, or whose service has been disconnected under Clause 5, or Clause 7 of this agreement, failing to arrange for the admittance of TBHEDI's employees for the purpose of obtaining a final meter reading, the Consumer shall pay a reasonable sum based on former meter readings for the energy supplied since the last meter reading together with all outstanding indebtedness incurred by the Consumer prior to the date of final meter reading.

14. TBHEDI shall not be liable for any injury, loss or damage to persons or property accruing or resulting from the failure of the supply of energy, from the failure to maintain a constant frequency or voltage, from any surge from natural or from accident not caused by the negligence of TBHEDI, or from the disconnection of the supply of energy due to nonpayment of account.

15. TBHEDI agrees to use reasonable diligence in providing a regular and uninterrupted supply of electrical energy, but does not guarantee a constant supply of electrical energy, or the maintenance of unvaried frequency or voltage, and will not be liable in damages to the Consumer by reason of any failure in any respect thereof.

16. As referenced in the Distribution System Code of Ontario, as TBHEDI does not guarantee an uninterrupted supply of power, those Consumers requiring an uninterrupted supply of power or dependent on life-sustaining equipment should purchase backup power generation.

17. All electrical and mechanical equipment used by the Consumer shall use electrical energy in a manner that will not endanger the equipment or other works of TBHEDI or those of a third party. Additionally, this equipment shall not cause any wide or abnormal fluctuation of its line voltage.

18. This agreement is subject to TBHEDI's "Conditions of Service", as amended from time to time, issued by the TBHEDI Engineering Department. Copies of TBHEDI's "Conditions of Service" will be supplied upon request and are also available at our website www.tbhydro.com - see the "Business" sub-menu and click on "Conditions of Service".

APPENDIX D

Demarcation Points and Charges

Connection Charges

All Customers (regardless of Customer class) will be provided with or entitled to a Basic Connection Credit (which is the supply and installation of overhead distribution transformation capacity or an equivalent credit for transformation equipment and up to 30 m of overhead conductor or an equivalent credit. A Variable Connection Charge will be payable equaling the Actual Connection Costs minus the Basic Connection Credit.

Residential –Single Service

Service Type at Property Line	Ownership Demarcation Point	Variable Connection Charge	Service Disconnection Fee (Initiated by Customer Request)
Overhead Secondary (Not requiring transformation facilities on private property) Not available for new subdivision lots or those created by severance as shown in Condition 1	Top of Customer's service mast (As per Section 3.1.4)	Actual costs for connection assets and installation beyond Basic Connection Credit	Recovered as part of Distribution Revenue Requirement and as such is part of TBHEDI's rates.
Underground Secondary (Not requiring transformation facilities on private property)	Line-side of Customer's meter base (As per Section 3.1.4)	Actual costs for connection assets and installation beyond Basic Connection Credit	Recovered as part of Distribution Revenue Requirement and as such is part of TBHEDI's rates.
Overhead Primary (Requiring transformation facilities on private property) Not available for new lots created by severance as shown in Condition 4	As per Section 3.1.4	Actual costs for connection assets and installation beyond Basic Connection Credit	Recovered as part of Distribution Revenue Requirement and as such is part of TBHEDI's rates.
Underground Primary (Requiring transformation facilities on private property solely to service a single customer)	As per Section 3.1.4	Actual costs for connection assets and installation beyond Basic Connection Credit	Recovered as part of Distribution Revenue Requirement and as such is part of TBHEDI's rates.
Underground (Subdivision)	As per Subdivision Agreement	Actual costs for connection assets and installation beyond Basic Connection Credit	Recovered as part of Distribution Revenue Requirement and as such is part of TBHEDI's rates.

General Service (Under 50 kW)

Service Type At Property Line	Ownership Demarcation Point	Variable Connection Charge	Service Disconnection Fee (Initiated by Customer Request)
Overhead (Not requiring transformation facilities on private property) Not available for new lots created by severance	Top of Customer's service mast. Refer to Section 3.2.4	Actual costs for connection assets and installation beyond Basic Connection Credit	Recovered as part of Distribution Revenue Requirement and as such is part of TBHEDI's rates.
Overhead (Requiring transformation facilities on private property)	First device on private property. Refer to Section 3.2.4	Actual costs for connection assets and installation beyond Basic Connection Credit	Recovered as part of Distribution Revenue Requirement and as such is part of TBHEDI's rates.
Underground (Not requiring transformation facilities on private property)	Line-side of Customer's meter. Refer to Section 3.2.4	Actual costs for connection assets and installation beyond Basic Connection Credit	Recovered as part of Distribution Revenue Requirement and as such is part of TBHEDI's rates.
Underground (Requiring transformation facilities on private property)	Secondary terminals of padmount transformer. Refer to Section 3.2.4	Actual costs for connection assets and installation beyond Basic Connection Credit	Recovered as part of Distribution Revenue Requirement and as such is part of TBHEDI's rates.

General Service (50 - 999 kW)

Service Type at Property Line	Ownership Demarcation Point	Variable Connection Charge	Service Disconnection Fee (Initiated by Customer Request)
Overhead Secondary (Not requiring transformation facilities on private property)	Top of Customer's service mast. Refer to Section 3.3.4	Actual costs for connection assets and installation beyond Basic Connection Credit	Customer charged actual costs associated with disconnection and/or removal of connection assets up to the demarcation point.
Underground Secondary (Not requiring transformation facilities on private property)	Line-side of Customer's meter or junction box on the exterior of the Customer's building structure. Refer to Section 3.3.4	Actual costs for connection assets and installation beyond Basic Connection Credit	Customer charged actual costs associated with disconnection and/or removal of connection assets up to the demarcation point.
Overhead Primary (Requiring TBHEDI owned transformation facilities on private property)	First point of attachment on private property. Refer to Section 3.3.4	Actual costs for connection assets and installation beyond Basic Connection Credit	Customer charged actual costs associated with disconnection and/or removal of connection assets up to the demarcation point and related switching/isolation.
Underground Secondary (Requiring TBHEDI owned transformation facilities on private property)	Transformer secondary terminals. Refer to Section 3.3.4	Actual costs for connection assets and installation beyond Basic Connection Credit	Customer charged actual costs associated with disconnection and/or removal of connection assets up to the demarcation point.

General Service (Above 1000 kW)

Service Type	Ownership Demarcation Point	Variable Connection Charge	Service Disconnection Fee (Initiated by Customer Request)
Overhead Primary (Customer owned transformation facilities on private property)	First point of attachment on private property. Refer to Section 3.4.4	Actual costs for connection assets and installation beyond Basic Connection Credit	Customer charged actual costs associated with disconnection and/or removal of connection assets up to the demarcation point. and related switching/isolation
Underground Primary (Customer owned substation/transformation on private property)	First point of attachment on private property. Refer to Section 3.4.4	Actual costs for connection assets and installation beyond Basic Connection Credit	Customer charged actual costs associated with disconnection and/or removal of connection assets up to the demarcation point. and related switching/isolation

APPENDIX F

Metering Requirements

Meter Sockets

Voltage	Phase	Wires	Maximum Service Switch Size Rating (Amperes)
120/240	1	3	200
120/240	1	3	400*
120/208	2	3	200
120/208	3	4	200
347/600	3	4	200

*The self-shorting meter mounting device shall contain a three (3) wire current transformer.

Note:

(1) A list of approved meter sockets is available on request.

(2) Meter sockets shall be mounted so that the midpoint of the meter is at 1700 mm ± 100 mm.

(3) All poly-phase metering shall have a neutral conductor. Where the Customer does not require a neutral, a full size neutral conductor sized in accordance with 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.

Instrument Transformer Compartments (Switchgear)

Voltage	Phase	Wire	Service Size (Amperes)	Compartment Size	Number of Instrument Transformers	
					Current	Voltage
120/208	3	4	up to 800A	See TBHEDI Engineering	3	0
120/208	3	4	over 800A	See TBHEDI Engineering	3	0
347/600	3	4	up to 800A	See TBHEDI Engineering	3	3
347/600	3	4	over 800A	See TBHEDI Engineering	3	3

Notes:

(1) For switchgear applications only.

(2). Instrument transformers will be provided and installed by TBHEDI.

(3) 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 TBHEDI supply.

Meter Centres

Meter centres may be used for general service applications of 600V applications or less provided they meet the following specifications:

(1) Side hinged doors or panels shall be installed over all sections of the switchboard where TBHEDI 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 or 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.

(3) Each combination meter socket and breaker panel shall have adequate space for permanent Customer identification with respect to street address and/or unit number.

(4) The centre of the bottom row of meter sockets shall not be less than 600 mm from the finished floor. The centre of the top row of meter sockets shall not be greater than 1800 mm from the finished floor.

(5) 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 up to 200-ampA., 4 or 5-jaw, not less than 76 mm.
(b) For up to 200-ampA., 7-jaw, not less than 152 mm.

(8) The meter mounting socket and sealing ring shall be acceptable to TBHEDI.

(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.