

MILTON HYDRO DISTRIBUTION INC.

# Conditions of Service

September 1, 2009

© Milton Hydro Distribution Inc.  
8069 Lawson Rd.  
Milton • Ontario  
L9T 5C4  
Phone (905) 876-4611 • Fax (905) 876-2044

1 INTRODUCTION .....	7
1.1 Identification of Distributor and Territory.....	7
1.2 Related Codes and Governing Laws .....	7
1.3 Interpretations.....	8
1.4 Amendments and Changes.....	9
1.5 Contact Information.....	9
1.6 Customer Rights.....	10
1.7 Distributor Rights .....	11
1.7.1 Access to Customer Property.....	11
1.7.2 Safety of Equipment.....	11
1.7.3 Liability for Damage to Milton Hydro Facilities and Equipment.....	12
1.7.4 Repairs of Defective Customer Electrical Equipment .....	12
1.7.5 Repairs of Customer’s Physical Structures .....	12
1.7.6 Force Majeure .....	13
1.8 Disputes.....	13
2 DISTRIBUTION ACTIVITIES (GENERAL) .....	15
2.1 Connections .....	15
2.1.1 Building that “Lies Along” .....	16
2.1.2 Expansions / Enhancements - Offer to Connect.....	18

2.1.2.2 <b>Alternate Bids</b> .....	20
2.1.2.3 <b>Rebates for Capital Contribution Customers</b> .....	21
2.1.3 Connection Denial.....	21
2.1.4 Inspections Before Connections .....	22
2.1.5 Relocation of Plant.....	23
2.1.6 Easements.....	24
2.1.7 Contracts.....	24
2.1.7.1 <b>Contract for New or Modified Electricity Service</b> .....	24
2.1.7.2 <b>Implied Contract</b> .....	25
2.1.7.3 <b>Special Contracts</b> .....	25
2.1.7.4 <b>Payment by Building Owner</b> .....	25
2.1.7.5 <b>Opening and Closing of Accounts</b> .....	25
2.2 Disconnection.....	26
2.2.1 Disconnection & Reconnection – Process and Charges .....	27
2.2.2 Unauthorized Energy Use .....	28
2.3 Conveyance of Electricity .....	28
2.3.1 Limitations on the Guaranty of Supply .....	28
2.3.2 Power Quality .....	29
2.3.3 Electrical Disturbances.....	32
2.3.4 Standard Voltage Offerings.....	33
2.3.5 Voltage Guidelines .....	34
2.3.6 Back-up Generators.....	35
2.3.7 Metering.....	35
2.4 Tariffs and Charges.....	42
2.4.1 Service Connection.....	42
2.4.2 Energy Supply.....	44
2.4.3 Security Deposits .....	45
2.4.4 Billing.....	45
2.4.5 Payments and Overdue Account Interest Charges .....	45
2.5 Customer Information.....	46
3.1 Residential Service .....	47
3.1.1 General Information.....	48
3.1.2 Early Consultation and Notification.....	48
3.1.3 Point of Demarcation.....	49
3.1.4 Access.....	49

3.1.5 Inspection.....	49
3.1.6 Overhead Services for Residential Service .....	49
3.1.7 Underground Services for Residential Service.....	50
3.2 General Service (Below 50 kW).....	51
3.2.1 General Information .....	52
3.2.2 Early Consultation and Notification.....	52
3.2.3 Point of Demarcation.....	53
3.2.4 Location of Service Equipment.....	54
3.2.5 Construction Responsibilities.....	54
3.2.6 Access.....	55
3.2.7 Inspection.....	55
3.2.8 Electrical Requirements (as applicable).....	55
3.2.9 Underground Service Requirements.....	56
3.2.10 Temporary Services (other than Residential).....	56
3.3 General Service (Above 50 kW to 1000 kW) .....	57
3.3.1 Transformation - Utility Owned.....	58
3.3.2 Electrical Requirements.....	58
3.3.3 Technical Information .....	59
3.3.4 Technical Considerations.....	61
3.3.5 Early Consultation and Notification.....	62
3.3.6 Point of Demarcation.....	62
3.3.7 Location of Service and Equipment .....	62
3.3.8 Access.....	62
3.3.9 Inspection.....	62
3.4 General Service (Above 1000 kW) .....	62
3.4.1 Primary Services in Overhead Distribution Areas.....	63
3.4.2 Primary Services in Underground Distribution Area.....	63
3.4.3 Electrical Requirements.....	64
3.4.4 Technical Information and Considerations.....	64
3.4.5 Early Consultation and Notification.....	64
3.4.6 Point of Demarcation.....	65
3.4.7 Location of Service and Equipment .....	65
3.4.8 Access.....	65
3.4.9 Inspection.....	65
3.5 Embedded Generation .....	65

3.5.1 Introduction .....	66
3.5.2 Milton Hydro Distribution System.....	67
3.5.3 Milton Hydro Utility Practices.....	68
3.5.4 Embedded Generator Interconnection Requirements and Procedure .....	69
3.5.5 General Responsibilities .....	75
3.5.6 Important Technical Requirements for Connection .....	77
3.6 Embedded Market Participant .....	78
3.7 Embedded Distributor .....	79
3.7.1 Contact Information.....	79
3.7.2 Energy Supply.....	80
3.7.3 Billing .....	80
3.7.4 Ownership.....	80
3.7.5 Assignment of Responsibility.....	81
3.7.6 Normal Operations .....	81
3.7.7 Communication .....	81
3.7.8 Emergency Operations .....	83
3.7.9 Metering and Fault Protection.....	83
3.7.10 Costs.....	83
3.7.11 Security Deposit.....	84
3.7.12 Liability.....	84
3.7.13 Force Majeure .....	85
3.8 Unmetered Connections .....	86
3.8.1 Street Lighting.....	86
3.8.2 Traffic signals and Pedestrian X-Walk Signals/Beacons .....	86
3.8.3 Bus Shelters, Telephone booths, Signs (< 5kW) and Miscellaneous Unmetered Loads (< 5kW) .....	87
3.8.4 Decorative Lighting and Tree Lighting Services .....	87
3.9 Temporary Service .....	88
3.9.1 General.....	88
3.9.2 Metering .....	89
4 GLOSSARY OF TERMS.....	89
5 APPENDICES.....	99

5.1	Table 1 – Voltage Limits.....	100
5.2	Table 2 – Cabinet Sizes.....	101
5.3	Milton Hydro Approved Meter Bases .....	102
5.4	Milton Hydro Policy - Security Deposits.....	104
5.4.1	Definitions:.....	104
5.4.2	Policy: .....	105
5.4.3	Form of Payment of Security Deposit: .....	105
5.4.4	Amount of Security Deposit: .....	105
5.4.5	Waiver/reduction of security deposit:.....	107
5.4.6	Interest on Security Deposits:.....	108
5.4.7	Security Deposit Review:.....	108
5.4.8	Security Deposit Refund: .....	109
5.4.9	FAILURE TO MEET SECURITY DEPOSIT REQUIREMENTS:..	109
5.4.10	TRANSITION:.....	109
	APPENDIX A .....	110
5.5	CONNECTION AGREEMENT .....	110
5.5.1.1	Space and Access .....	111
5.5.1.2	Responsibility for Equipment.....	111
5.5.1.3	Disconnection .....	111
5.5.1.4	<b>Reliability</b> .....	112
5.5.1.5	Conditions of Service.....	112
5.5.1.6	Binding.....	112
5.5.1.7	Maintenance Requirements.....	112
5.5.1.8	Security Deposit .....	112
5.5.1.9	Termination .....	112
5.5.1.10	Successors .....	113
5.5.1.11	Approval of Equipment .....	113
5.5.1.12	Fire or Other Casualty.....	113

# 1 INTRODUCTION

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

Terms contained in these Conditions of Service or in any contract for the supply of electricity by Milton Hydro shall not prejudice or affect any rights, privileges, or powers vested in Milton Hydro by law under any Act of the Legislature of Ontario or the Parliament of Canada, or any Regulations thereunder.

The definitions of terms used in these Conditions of Service appear in section 4.0. Capitalized expressions used in these Conditions of Service have the meaning ascribed in that section.

## 1.1 Identification of Distributor and Territory

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

Milton Hydro is a corporation incorporated under the laws of the Province of Ontario to distribute electricity.

Milton Hydro is licensed by the Ontario Energy Board ("OEB") to supply electricity to Customers as described in its Distribution License issued on June 27, 2003, by the OEB ("Distribution License"). Additionally, there are requirements imposed on Milton Hydro by the various codes referred to in the License and by the Electricity Act, 1998 and the Ontario Energy Board Act, 1998.

Milton Hydro may only operate distribution facilities within its Licensed Territory as defined in its Distribution License. The current distribution territory is the area within the municipal boundaries of the Corporation of the Town of Milton. This service area may be changed from time to time with the approval of the OEB.

## 1.2 Related Codes and Governing Laws

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

The supply of electricity or related services by Milton Hydro to any Customer shall be subject to the various laws, regulations, and codes, including but not limited to, the provisions of the latest editions of the following documents:

- 1) Electricity Act, 1998
- 2) Ontario Energy Board Act, 1998
- 3) Electricity Pricing, Conservation and Supply Act, 2002
  
- 4) Distribution License
- 5) Affiliate Relationship Code
- 6) Transmission System Code
- 7) Distribution System Code
- 8) Retail Settlement Code
- 9) Standard Supply Service Code

In the event of a conflict between this document and the Distribution License or regulatory codes issued by the OEB, or the Energy Competition Act, 1998 (the “Act”), the provisions of the Act, the Distribution License and associated regulatory codes shall prevail in the order of priority indicated above. The related codes and governing laws are not all-inclusive; other codes and laws may apply. If there is a conflict between an agreement or contract with a Customer and these Conditions of Service, these Conditions of Service shall govern.

These Conditions of Service will be deemed to have been automatically amended to the minimum extent necessary to achieve compliance with such laws, regulations and codes.

## 1.3 Interpretations

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

In these Conditions, unless the context otherwise requires:

- Headings, paragraph numbers and underling 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
- an agreement, representation or warranty on the part of or in favour of two or more persons binds or is for the benefit of them jointly and severally;
- specified periods of time refer to business days, and dates from a given day or the

- day of an act or event is to be calculated exclusive of that day;
- a reference to a day is to be interpreted as the period of time commencing at midnight and ending 24 hours later and does not include weekends and statutory holidays in the Province of Ontario. Statutory Holidays means the days designated by Milton Hydro from time to time. Until otherwise designated, the statutory holidays are:

New Year's Day Labour Day Good Friday  
Thanksgiving Day Easter Monday Christmas Day  
Victoria Day Boxing Day Canada (Dominion) Day

## 1.4 Amendments and Changes

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

The provisions of these Conditions of Service and any amendments made from time to time form part of any Agreement or Contract made between Milton Hydro and any connected Customer, Retailer or Generator, and these Conditions of Service supercedes all previous Conditions of Service, oral or written, of Milton Hydro or any of its predecessor municipal electric utilities as of the effective date of these Conditions of Service.

In the event of changes to these Conditions of Service, Milton Hydro shall issue a notice in a local newspaper, a notice on its website, or a notice on the Customer's bill.

The current version of this document is also posted on the Milton Hydro website and can be downloaded from [www.miltonhydro.com](http://www.miltonhydro.com).

## 1.5 Contact Information

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

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

The normal business hours of Milton Hydro are 8:30 a.m. to 4:30 p.m., Monday to Friday, excluding statutory holidays.

Milton Hydro may be contacted by:

- Mail: Milton Hydro  
8069 Lawson Rd.  
Milton, Ontario,  
L9T 5C4
- Website: [www.miltonhydro.com](http://www.miltonhydro.com)
- Phone:

General Inquiry:	(905) 876-4611	8:30 am – 4:30 pm
Emergency:	(905) 876-4611	7days by 24 hrs/day
One Call Locate Service	1(800) 400-2255	7days by 24 hrs/day
Streetlights:	(905) 876-4611	8:30 am – 4:30 pm
Fax:	(905) 876-2044	7days by 24 hrs/day
E-mail:	<a href="mailto:customerservice@miltonhydro.com">customerservice@miltonhydro.com</a>	

## 1.6 Customer Rights

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

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

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

Notwithstanding the above, neither Milton Hydro, the Customer nor Embedded Generator shall be liable under any circumstances whatsoever for any loss of profits or revenues, business interruption losses, loss of contract or loss of goodwill, or for any indirect, consequential, incidental or special damages, including but not limited to punitive or exemplary damages, whether any of the said liability, loss or damages arise in contract, tort or otherwise.

The Customer or Embedded Generator shall indemnify and hold harmless Milton Hydro, 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 Customer or the Embedded Generator.

## 1.7 Distributor Rights

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

### 1.7.1 Access to Customer Property

Milton Hydro shall have access to Customer property in accordance with *Section 40 of the Electricity Act, 1998*.

The Customer shall provide Milton Hydro, free of charge or rent, with a convenient and safe place for Milton Hydro's Facilities and Equipment on the Customer's premises or approaches thereto. Milton Hydro assumes no risk and under no circumstances will Milton Hydro be liable for any damages resulting from, arising out of or related to the presence of Milton Hydro Facilities and Equipment.

The Customer shall not allow anyone other than an employee, or authorized agent of Milton Hydro, or a person lawfully entitled to do so, to repair, remove, replace, alter, inspect or tamper with the Milton Hydro Facilities and Equipment on the Customer's premises.

### 1.7.2 Safety of Equipment

The Customer will 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 operating purposes. The Customer will take whatever steps necessary to correct any deficiencies within **72 hours** of written notice by Milton Hydro to the Customer.

If the Customer does not take such action within this time frame, Milton Hydro shall disconnect the supply of power to the Customer. The policies and procedures of Milton Hydro with respect to the disconnection process are further described in these Conditions of Service.

The Customer shall not build or cause to be built, plant or maintain any structure, trees, shrubs, or landscaping etc. that, in the sole opinion of Milton Hydro, would or could obstruct or endanger any Milton Hydro Facilities and Equipment, interfere with the proper and safe operation of the Distribution System or any part thereof or affect Milton Hydro's compliance with any Applicable Laws. The Customer shall not access, use or interfere with the distribution facilities of Milton Hydro except in accordance with a written agreement. 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 line side of metering equipment.

### 1.7.3 Liability for Damage to Milton Hydro Facilities and Equipment

Milton Hydro Facilities and Equipment located on the Customer's premises are in the care of and at the risk of the Customer. If any of Milton Hydro's Facilities and Equipment are damaged or destroyed by fire or any other cause other than ordinary wear and tear, the Customer shall pay Milton Hydro the value of said Milton Hydro Facilities and Equipment or the cost of repairing or replacing same.

### 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 Milton Hydro's distribution system. If the Customer does not take such action within 72 hours of written notice, Milton Hydro may disconnect the supply of power to the Customer. Milton Hydro's policies and procedures with respect to the disconnection process are further described in these Conditions.

### 1.7.5 Repairs of Customer's Physical Structures

Where applicable, Customer Equipment shall be subject to the reasonable acceptance of Milton Hydro and the approval of the Electrical Safety Authority. Milton Hydro's approval of any Customer Equipment is solely for the purposes of Milton Hydro protecting its Distribution System and the Customer is solely responsible for protecting its own property.

Depending on the ownership demarcation point, construction and maintenance of all civil works on private property owned by the Customer, including such items as transformer vaults, transformer rooms, transformer pads, cable chambers, cable pull rooms and underground conduit, will be the responsibility of the Customer. All civil work on private

property must be inspected and accepted by Milton Hydro and the Electrical Safety Authority. The Customer is responsible for the maintenance and safe keeping conditions satisfactory to Milton Hydro of its structural and mechanical facilities located on private property.

#### 1.7.6 Force Majeure

Other than for any amounts due and payable by the Customer to Milton Hydro or by Milton Hydro to the Customer, neither Milton Hydro 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) other than for Force Majeure Events related to acts of God, 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 the 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; and
- (e) other than for Force Majeure Events related to acts of God, provide written notice to the other party when it resumes performance of any obligations affected by the Force Majeure Event;
- (f) if the Force Majeure Event is a strike or a lock out of Milton Hydro's employees or authorized agents, Milton Hydro shall be entitled to discharge its obligations to notify its Customers in writing by means of placing an ad in the local newspaper.

## 1.8 Disputes

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

Any disputes between Customers, embedded generators or retailers and Milton Hydro shall be settled according to the dispute resolution process specified in Section 16 of the Distribution License ED-20030014.

In order to comply with the requirements in its License, Milton Hydro provides the following dispute resolution process:

- a) To register a complaint, a Customer, embedded generator or retailer must call or write the Vice-President of the appropriate Department of Milton Hydro. The Vice-President will initiate the complaint record which will include:
  - The name of the complainant;
  - The date of the complaint;
  - The nature of the complaint;
  - The result of the dispute resolution;
  - The date resolved or referred to the next level.
  
- b) If the matter is not satisfactorily resolved by the Vice-President within ten (10) business days or a mutually agreed upon time period, the Customer, embedded generator, or retailer may refer the matter to the President/CEO of Milton Hydro, who will address the matter in consultation with the applicable Vice-President. The President/CEO will complete the complaint record with the following information:
  - The result of the dispute resolution;
  - The date resolved or referred to the independent third party.
  
- c) If the matter is not satisfactorily resolved by the President/CEO within a further ten (10) business days or a mutually agreed upon time period, complaints can be escalated to a third party complaints resolution agency which has been approved by the OEB. Until such time as the OEB approves an independent third party dispute resolution agency, the OEB will assume this role and can be contacted at 1-877-632-2727.

The Customer or the embedded generator shall be liable for any and all costs incurred in either preparing for or presenting their complaint to the independent third party. Milton Hydro shall be responsible for its costs of preparing and presenting its response to the complaint. The written result of the dispute resolution is to be attached to the complaint record.

- d) The complaint record and any supporting documentations are to be filed by the President's Executive Assistant.
- e) A copy of this dispute resolution process is available on Milton Hydro's website at <http://www.miltonhydro.com/>, in the front lobby of Milton Hydro's offices, and by mail or fax as outlined in section 1.5 . There is no charge for obtaining a copy of the complaint procedure.

## 2 DISTRIBUTION ACTIVITIES (GENERAL)

This section includes information that is applicable to all Customer classes of Milton Hydro. Items that are applicable to only a specific Customer class are covered in Section 3.

### 2.1 Connections

Under the terms of the Distribution System Code, Milton Hydro has the obligation to either connect or to make an offer to connect any Customers that lies in its service area.

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

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

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

Milton Hydro shall make every reasonable effort to respond promptly to a Customer's request for connection. Milton Hydro shall respond to a customer's written request for a Customer connection within fifteen (15) calendar days of receipt of the written request.

Milton Hydro will make an offer to connect within sixty (60) calendar days of receipt of the written request, unless other necessary information is required from the Customer before the offer can be made.

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

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

Milton Hydro, in its discretion, may require a Customer, generator or distributor to enter into a Connection Agreement with Milton Hydro including terms and conditions in addition to those expressed in these Conditions (refer to the sample in the DSC Code - Appendix D).

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

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

All connections, disconnections and reconnections on Milton Hydro's side of the Customer's service entrance must be performed by Milton Hydro employees or its appointed agents and shall be arranged in advance by the Customer or contractor.

### 2.1.1 Building that "Lies Along"

In this section, the Distributor should describe the standard connection allowance or charge used by the Distributor in its

service territory and describe any variable connection fees that would be charged beyond the standard allowance.

The Distributor also may stipulate in this section other terms and conditions by which a Customer requesting a Connection must abide, as long as it is within the terms of the DSC code.

For the purpose of these Conditions, “**lies along**” means a Customer property or parcel of land that is directly adjacent to, or abuts onto the public road allowance where Milton Hydro has distribution facilities of the appropriate voltage and capacity.

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

- a) The building can be connected to Milton Hydro’s Distribution system without an Expansion or Enhancement and;
- b) The service installation meets the conditions listed in these Conditions of Service.

Where a building “lies along” Milton Hydro’s distribution system facilities, all new services will be installed below grade, in accordance with Milton Hydro’s specifications for underground services except in areas defined by Milton Hydro as overhead.

The location of the Customer's service entrance equipment will be subject to the approval of Milton Hydro and the Electrical Safety Authority.

A Basic Connection is the connection of a building that lies along Milton Hydro’s Distribution System and requires no System Expansion work in order to connect. Milton Hydro provides Basic Connection to all Customers whose rate classification is residential. For all costs associated with the installation of connection assets above what is allowed for in the Basic Connection, Milton Hydro will recover these costs from the customer through a connection charge or equivalent payment. The Basic Connection consists of:

- a) supply and installation of standard overhead transformation which includes secondary bus extensions or installations complete with conductor and anchoring;
- b) an estimate and layout for the new service;
- c) connection of the Secondary or Primary Service at described Demarcation Points;
- d) the supply and installation of up to 30 meters of 3/0 triplex overhead secondary conductor for up to a 200 amp service, or an equivalent credit towards underground conductor. Residential Customers with Primary Services will be credited for the 30 meters of secondary wire.

All non-residential Customers will be responsible for all customer-specific connection costs . These may include:

- a) the cost of Milton Hydro supplied overhead and underground secondary wire;
- b) costs associated with the supply and installation of overhead or underground transformation;
- c) the supply and installation of poles, anchors, all conductor, hardware, and structures, as required on Customer's property;
- d) any other costs of connecting to Milton Hydro's Distribution System;

**Note:** For the purpose of these Conditions, subdivisions, multi-units or townhouse type developments are considered as Non-Residential Class of Customers.

Where applicable, all Customers will also 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 Milton Hydro;
- c) a service upgrade charge;
- d) the cost of any fees, permits, or other permissions required to connect the service.

## 2.1.2 Expansions / Enhancements - Offer to Connect

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

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

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

Under the terms of the Distribution System Code, Milton Hydro is required to make an "offer to connect" to any Customer that is in Milton Hydro's service territory. When in order to connect a Customer, Milton Hydro must construct new distribution system facilities (an "Expansion" of its system) or increase the capacity of existing distribution facilities (an "Enhancement" of its system), Milton Hydro will perform an economic evaluation to determine the Customer's share, if any, of the equipment, labour, material and on-going maintenance costs of the Expansion ("Expansion Costs"). If the present value of the future revenue is not sufficient to recover the Expansion Costs, the Customer will be required to pay a capital contribution. The capital contribution shall not

exceed the Customer's share of the difference between the present value of the Expansion Costs and the present value of the projected revenue.

Milton Hydro performs the economic evaluation using a Discounted Cash Flow Model in the following manner:

**Residential Subdivisions:**

Prior to January 23, 2007, for residential subdivisions the evaluation is performed once a year on the anniversary date of the signing of the subdivision agreement for the duration of the five (5) year revenue horizon; the evaluation is performed on an individual subdivision basis using revenues based on actual Customer connections and load and actual costs. Milton Hydro's contribution will be determined annually based on this process.

Effective January 23, 2007, for residential subdivisions, the evaluation is performed once a year on anniversary date that the facilities are energized for the duration of the five (5) year revenue horizon; the evaluation is performed on an individual subdivision basis using revenues based on actual Customer connections and load and actual costs. Milton Hydro's contribution will be determined annually based on this process.

**All Other Customers, Embedded Distributors and Embedded Generators:**

For all other Customers, Embedded Distributors and Embedded Generators, the evaluation is performed on an individual basis using revenues based on estimated customer load and the estimated cost of the Customer connection.

Any shortfall is collected as a capital contribution.

**Revenue Horizon and Guarantees**

Milton Hydro uses a revenue horizon of up to 25 years to project forecasted revenues based on the forecasted load from the connection(s). The load forecast and the revenue horizon will be determined at the sole discretion of Milton Hydro. In support of the forecast, the Customer may be required to provide a revenue guarantee.

**2.1.2.1 Offer to Connect**

Milton Hydro will respond to requests for Connection within the following timeframes:

- a) from Customers by no later than 15 calendar days from receipt of the request. At this time, Milton Hydro will specify any information that must be provided, and any obligations that must be met by the Customer in order for Milton Hydro to process the request. An offer to connect will be made by no later than 60 calendar days following Milton Hydro's receipt of all necessary information and the Customer's meeting of all its obligations; and
- b) from Embedded Generators and Embedded Distributors by no later than 30 calendar days after receipt of a request. At this time, Milton Hydro will specify any information that must be provided, and any obligations that must be met, by the Customer in order for Milton Hydro to process the request. An offer to connect will be made by no later than 90

calendar days following Milton Hydro's receipt of all necessary information the Customer's meeting of all its obligations.

At a minimum, the "offer to connect" will contain:

- a) a description of material and labour required to build the Expansion to connect the Customer if a capital contribution is required from the Customer;
- b) an estimated cost of Expansion that would be revised based upon the actual costs incurred;
- c) an estimate of the capital contribution to be charged to the Customer to construct the Expansion. The estimate will delineate costs attributed to engineering design, materials, labour, equipment, and administrative activities;
- d) a description and estimate of the connection charges that would apply;
- e) identification of work for which the Customer may seek alternative bids;
- f) terms and conditions for payments and expansion deposits required; and
- g) any additional information pertinent to the offer.
- h) the amount of expansion deposit required to be paid by the customer
- i) description including the cost of the contestable and uncontestable work
- j) a reference to Milton Hydro's Conditions of Service and the DSC, and information on how the customer requesting the connection may obtain copies of them

### **2.1.2.2 Alternate Bids**

Customers may seek alternative bids for the connection and Expansion facilities for the contestable work from Qualified Contractors if the offer meets the following conditions:

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

At the request of the Customer, Milton Hydro will provide a list of Qualified Contractors to perform the work eligible for an alternative bid. Milton Hydro will also advise the Customer that they have the choice to obtain alternative bids from a qualified contractor for the construction of those connection and expansion facilities that are specified in the Offer to Connect as contestable work for which the Customer may obtain an alternative bid.

To qualify to undertake contestable work, contractors shall submit a Construction Contractor Qualification Application and meet Milton Hydro's Requirements. Milton Hydro does not make any representation or warranty regarding any contractor selected by the Customer to do any work regardless of whether the contractor has completed the requirements set by Milton Hydro or not and shall have no liability to the Customer in respect of such work.

The Customer shall be responsible for:

- a) selecting, hiring, and paying the Qualified Contractor 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. Administering the contract includes acquisition of all required permissions, permits, and property rights as required;
  - d) constructing the System Expansion (line extension) to meet Milton Hydro's design requirements;
  - e) paying an inspection fee to Milton Hydro for inspection of the construction;
  - f) paying the cost of any easements or property agreements as required by Milton Hydro;
  - g) transferring ownership of the facilities built on public property or servicing more than one Customer to Milton Hydro for a nominal fee prior to connection;
  - h) paying costs for any additional design and engineering; and
  - i) paying all applicable Electrical Safety Authority inspection fees.

Milton Hydro shall be responsible for:

- a) providing the design and material specifications for the construction; and
- b) inspecting and authorizing the line for connection.

### **2.1.2.3 Rebates for Capital Contribution Customers**

In the event that a Customer is added to an Expansion that was paid for by another Customer, on or after November, 2000 and within 5 years of the original construction, the Customer will contribute their fair share of the original Expansion costs prior to the connection for the shared portion of the line, and the original contributor will be entitled to a rebate without interest based on the apportioned benefit for the remaining period. The apportioned benefit shall be determined by Milton Hydro, considering the relative line length (in proportion to the line length being shared by both parties). No rebates will occur after the 5-year connection horizon has expired.

### 2.1.3 Connection Denial

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

Milton Hydro may deny Connection to any Customer for any of the following reasons:

- a) refusal by the Customer to sign any agreements or provide an easement(s) required to be executed by the Customer under these Conditions of Service
- b) failure to meet Milton Hydro's security deposit policy requirements as outlined under these Conditions of Service
- c) the Connection will represent a contravention of the laws of Canada or the Province of Ontario;
- d) the Connection will cause Milton Hydro to be in violation of the conditions in Milton Hydro's Distribution License;
- e) the Connection will have a material adverse effect on the reliability or the safety of the Distribution System;
- f) the Connection will cause a material decrease in the efficiency of the Distribution System;
- g) the Connection will have a material adverse effect on the quality of the Distribution service received by an existing Customer. Such affect on quality could be among other things, voltage flicker, harmonics or power outages;
- h) the Connection will result in the discriminatory access to Distribution Services by other Customers;
- i) the person requesting the Connection is currently in arrears for Distribution Services, electricity supplied, or other services provided by Milton Hydro;
- j) the Connection is not in compliance with these Conditions of Service;
- k) the Connection does not meet Milton Hydro's design requirements;
- l) the Connection will impose an unsafe situation to workers or the public beyond the normal risks inherent in the operation of the Distribution System;
- m) the Connection will result in the inability of Milton Hydro to perform planned inspections or maintenance;
- n) by order of the Electrical Safety Authority;
- o) the Customer does not have the requisite approval(s) of the Electrical Safety Authority for the Connection;
- p) the premises being connected are the subject of a stop work order under the Building Code Act ("Ontario"); or
- q) the Customer is within another Distributor's service area and Milton Hydro does not wish to provide service.

Milton Hydro shall notify the Customer of the Connection denial with reasons in writing. Remedies will be suggested to the Customer where Milton Hydro is able. If it is not possible for Milton Hydro to resolve the issue, it is the responsibility of the Customer to do so before a Connection will be made.

#### 2.1.4 Inspections Before Connections

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

All Customer-electrical installations shall be inspected and approved by the Electrical Safety Authority and must also meet Milton Hydro's requirements. Milton Hydro requires notification from the Electrical Safety Authority of this approval prior to the

energization of a Customer's supply of electricity. Any drawings supplied by Milton Hydro referring to Customer owned equipment are to be used as a guide only. Customers are required to comply with the Electrical Safety Authority Code. Currently, services that have been disconnected for a period of six months or longer must also be re-inspected and approved by the Electrical Safety Authority, prior to reconnection.

Temporary services must be approved by the Electrical Safety Authority and be re-inspected should the period of use exceed twelve months.

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

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

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

Upon receipt of written approval by the Electrical Safety Authority, Milton Hydro will energize a new electrical service (low voltage), normally within five (5) working days and energize a new electrical service (high voltage), normally within ten (10) working days. A longer time interval may be required if it is necessary to arrange for power interruption to other Customers. During extremely busy periods Milton Hydro, due to previously scheduled commitments and limited resources, may be required to energize the service after normal business hours.

Provisions for metering shall be inspected and approved by Milton Hydro prior to energization.

#### 2.1.5 Relocation of Plant

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

A Customer requesting a plant relocation is required to pay Milton Hydro all associated costs incurred by Milton Hydro in relocating the plant. If the relocation is from public to Private Property, Milton Hydro shall acquire easement rights at the expense of the requestor. This would include the actual cost to carry out the work, as well as any costs resulting from having to obtain the new easement or authorization equivalent.

When requested to relocate distribution plant, Milton Hydro 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, Milton Hydro is not obligated to relocate the plant.

However, Milton Hydro 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.

When requested to relocate distribution system facilities, all new services will be installed below grade, in accordance with Milton Hydro's specifications for underground services except in areas defined by Milton Hydro as overhead.

#### 2.1.6 Easements

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

##### **Unregistered Easements:**

The Electricity Act provides that all property that is subject to unregistered rights prior to April 1, 1999 will continue to be subject to the right until the right expires or until it is released by the holder of the right.

##### **Registered Easements:**

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

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

Easements are required where Milton Hydro 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 Milton Hydro deems it necessary. The Customer will prepare at its own cost any required reference plan and associated easement documents to the satisfaction of Milton Hydro prior to registering the easement plan. Four copies of the deposited reference plan must be supplied to Milton Hydro prior to the preparation of the easement documents. Details will be provided upon application for service. The Customer is responsible for registering the reference plan while Milton Hydro will register the easement documents.

#### 2.1.7 Contracts

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

##### **2.1.7.1 Contract for New or Modified Electricity Service**

Milton Hydro shall only connect a Customer for a new or modified supply of electricity

upon receipt by Milton Hydro of a completed and signed contract for service in a form acceptable to Milton Hydro, payment to Milton Hydro of any applicable connection charge, and an inspection and approval by the Electrical Safety Authority of the electrical equipment for the new service. A contract to supply electricity is not transferable.

#### **2.1.7.2 Implied Contract**

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

Any Person or Persons who take or use electricity from Milton Hydro shall be liable for payment for such electricity. Any implied contract for the supply of electricity by Milton Hydro shall be binding upon the heirs, administrators, executors, successors or assigns of the Person or Persons who took and/or used electricity supplied by Milton Hydro.

#### **2.1.7.3 Special Contracts**

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

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

#### **2.1.7.4 Payment by Building Owner**

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

A Building owner wishing to terminate the supply of electricity to its Building must notify Milton Hydro in writing. Until Milton Hydro receives such written notice from the Building owner and has terminated the supply which termination should occur within 48 hours from the receipt of such written notice, the Building owner or the occupant(s), as applicable, shall be responsible for payment to Milton Hydro for the supply of electricity to such Building. Milton Hydro may refuse to terminate the supply of electricity to an owner's Building when there are occupant(s) in the Building.

#### **2.1.7.5 Opening and Closing of Accounts**

A Customer who wishes to open an account for the supply of electricity by Milton Hydro

shall contact Milton Hydro by phone, by written request (including requests submitted by facsimile), through Milton Hydro's web site, or other means acceptable to Milton Hydro. A Customer who wishes to close an account with Milton Hydro must notify Milton Hydro by phone, by written request (including requests submitted by facsimile), through Milton Hydro's web site, or other means acceptable to Milton Hydro. Until Milton Hydro receives such notice from the Customer or its authorized retailer, the Customer shall be responsible for payment to Milton Hydro for the supply of electricity to the Customer.

## 2.2 Disconnection

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

Milton Hydro shall not be liable for damage or claim as a result of the disconnection or limitation of service.

Milton Hydro reserves the right to disconnect or limit the supply of electrical energy for causes not limited to:

- Failure to pay Milton Hydro any amounts due and payable for the distribution of electricity or for supply of electricity under Section 29 of the Electricity Act;
- Failure to pay any connection costs due and payable;
- Non payment of security deposit requirement in accordance with Milton Hydro's security deposit policy;
- Contravention of the laws of Canada or the Province of Ontario;
- Adverse effect on the reliability and safety of the distribution system;
- Imposition of an unsafe worker situation beyond normal risks inherent in the operation of the distribution system;
- A material decrease in the efficiency of the distributor's distribution system;
- A materially adverse effect on the quality of distribution services received by an existing connection;
- Discriminatory access to distribution services;
- Inability of Milton Hydro to perform meter reading, planned inspections and maintenance;
- Failure of the Customer to comply with a directive of Milton Hydro that Milton Hydro makes for purposes of meeting its license obligations;
- Electrical disturbance propagation caused by Customer equipment that are not corrected in a timely fashion; or
- failure of the Customer to comply with any requirements in these Conditions of Service or a term of any agreement made between the Customer and Milton Hydro including but not limited to a Connection Agreement or a Connection and Cost Recovery Agreement;
- failure of the Customer to enter into a Connection Agreement required by these

- Conditions of Service;
- 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.

### 2.2.1 Disconnection & Reconnection – Process and Charges

Milton Hydro will, where possible, provide the Customer with at least 7 days prior written notice before disconnecting or limiting the Distribution of electricity to a Customer.

Immediately following the due date, steps will be taken to collect the unpaid amount of the bill. If the bill is still unpaid sixteen calendar days after the due date and seven (7) calendar days after a disconnect notice has been delivered to the Customer, the service may be disconnected and not restored until satisfactory payment arrangements have been made, including costs of reconnection. Such discontinuance of service does not relieve the Customer of the liability for arrears or minimum bills for the balance of the term of contract, nor shall Milton Hydro be liable for any damage to the Customer's premises resulting from such discontinuance of service.

Milton Hydro may interrupt a Customer without notice in accordance with a court order, or for Emergency, safety or system reliability reasons or in order to inspect, maintain, repair, alter, remove, replace or disconnect wires or other facilities used to Distribute electricity or where there is energy diversion, fraud or abuse on the part of the Customer. Under no circumstances will Milton Hydro be liable for any damage resulting from, associated with or related to the Disconnection or the limitation of consumption of electricity.

Upon discovery that a hazardous condition or disturbance propagation (feedback) exists, Milton Hydro will notify the Customer to rectify the condition at once. In the event that the Customer fails to make satisfactory arrangements to remedy the condition within seven (7) calendar days after a disconnect notice has been given to the Customer, the service may be disconnected and not restored until satisfactory arrangements to remedy the condition have been made.

Where the reason for the Disconnection has been remedied to Milton Hydro's satisfaction, Milton Hydro shall reconnect a Customer. All costs associated with the disconnection and reconnection shall be paid for by the Customer prior to reconnection of the service.

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

- a) where Milton Hydro has reason to believe that the wiring may have been damaged or altered ;
- b) where service was disconnected for modification of Customer wiring;
- c) where service has been disconnected for a period of six months or longer;
- d) where the service was disconnected as a result of an adverse effect on the reliability and safety of the Distribution System, or
- e) where it is a requirement of the Ontario Electrical Safety Code.

A collection charge shall apply in cases where it is necessary for Milton Hydro to make a trip to the Customer's premises to collect payment for an overdue account, disconnect service, install a load limiter, or reconnect service.

### 2.2.2 Unauthorized Energy Use

Milton Hydro reserves the right to disconnect the supply of electrical energy to a Customer for causes not limited to energy diversion, fraud or abuse on the part of the Customer. Such service may not be reconnected until the Customer rectifies the condition and provides full payment to Milton Hydro including all costs incurred by Milton Hydro arising from unauthorized energy use, including inspections, repair costs, and the cost of disconnection and reconnection.

## 2.3 Conveyance of Electricity

### 2.3.1 Limitations on the Guaranty of Supply

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

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

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

Milton Hydro will endeavour to maintain voltage variation limits under normal operating conditions at the Ownership Demarcation Point, as specified by the latest edition of the Canadian Standards Association, C235 "Preferred Voltages for AC Systems, 0 – 50,000 volts"

Customers requiring a three-phase supply should install protective apparatus to avoid damage to their equipment, which may be caused by the interruption of one phase, or non-simultaneous switching of phases of the Distributor's supply. Damages resulting from the failure to install protective apparatus shall be at the Customer's expense.

During an emergency, Milton Hydro may interrupt supply to a Customer in response to a shortage of supply, or to effect repairs on the distribution system, or while repairs are being made to Customer-owned equipment.

It may be necessary to interrupt a Customer's supply to maintain or improve the Milton Hydro distribution system, or to provide new or upgraded services to other Customers. Whenever practical and cost effective, as determined by Milton Hydro, arrangements suitable to the Customer and Milton Hydro will be made to minimize any inconvenience. Except in cases of extreme emergency involving danger to life and limb or impending severe equipment damage, or due to practical considerations, Milton Hydro will endeavor to provide the Customer with reasonable advance notice of power interruptions.

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

Milton Hydro shall have rights to access to a property in accordance with section 40 of the *Electricity Act, 1998* and any successor acts thereto. Milton Hydro or its authorized agents may enter the Customer's property at any time for any of the following purposes:

- a) to install, inspect, read, calibrate, maintain, repair, alter, remove, or replace a meter;
- b) to inspect, maintain, repair, alter, remove, replace, or disconnect wires or other facilities used to transmit or distribute electricity; or
- c) to inspect, maintain, repair, alter, remove, and replace Milton Hydro Facilities and Equipment such as sentinel lights and streetlights.

### 2.3.2 Power Quality

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

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

intermittent should be described.

### **2.3.2.1 Power Quality Testing**

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

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

### **2.3.2.2 Prevention of Voltage Distortion on Distribution**

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

### **2.3.2.3 Obligation to Help in the Investigation**

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

### **2.3.2.4 Timely Correction of Deficiencies**

If an undesirable system disturbance is being caused by Customer's equipment, the Customer will be required to cease operation of the equipment until satisfactory remedial

action has been taken by the Customer at the Customer's cost. If the Customer does not take such action within a reasonable time, Milton Hydro may disconnect the supply of power to the Customer.

### **2.3.2.5 Notification for Interruptions**

Although it is Milton Hydro's policy to minimize inconvenience to Customers, it is necessary to occasionally interrupt a Customer's supply to allow work on the electrical system. Milton Hydro will endeavor to provide the Customers with reasonable notice of planned power interruptions. Notice may not be given where work is of an emergency nature involving the possibility of injury to persons or damage to property or equipment.

However, during an emergency, Milton Hydro may interrupt supply to a Customer in response to a shortage of supply or to effect repairs on Milton Hydro's distribution system or while repairs are being made to Customer-owned equipment.

### **2.3.2.6 Notification to Customers on Life Support**

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

With planned interruptions, the same procedure as prescribed in section 2.2.1. will be observed. For those unplanned power interruptions that extend beyond two hours and the time expected to restore power is longer than what was indicated by Customers (registered on life support) as their available backup power, Milton Hydro will endeavor to contact these Customers but will not be liable in any manner to the Customers for failure to do so.

### **2.3.2.7 Emergency Interruptions for Safety**

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

### **2.3.2.8 Emergency Service (Trouble Calls)**

Milton Hydro will exercise reasonable diligence and care to deliver a continuous supply of electrical energy to the Customer. However, Milton Hydro cannot guarantee a supply

that is free from interruption.

When power is interrupted, the Customer should first ensure that failure is not due to blowing of fuses or tripping of circuit breakers within the installation. If there is a partial power failure, the Customer should obtain the services of an electrical contractor to carry out necessary repairs. If, on examination, it appears that Milton Hydro's main source of supply has failed, the Customer should report these conditions at once to Milton Hydro by calling (905)-876-4611.

Emergency Service or Trouble Calls which indicate damage or impending damage to Milton Hydro plant or property are attended to immediately at Milton Hydro's expense, unless others are found liable.

Milton Hydro operates 24 hour, 7 day per week call centre to respond to emergencies. Milton Hydro will initiate restoration efforts as rapidly as practicable.

### **2.3.2.9 Outage Reporting**

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

### 2.3.3 Electrical Disturbances

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

Milton Hydro shall not be held liable for the failure to maintain supply voltages within standard levels due to Force Majeure as defined in Section 1.7.6 of these Conditions.

Voltage fluctuations and other disturbances can cause flickering of lights and other serious difficulties for Customers connected to Milton Hydro's distribution system.

Customers must ensure that their equipment does not cause disturbances such as harmonics and spikes that might interfere with the operation of adjacent Customer equipment. Equipment that may cause disturbances, include large motors, welders and variable speed drives, etc.

In planning the installation of such equipment, the Customer must consult with Milton Hydro.

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

Milton Hydro will assist in attempting to resolve any such difficulties at the Customer's

expense.

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

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

#### 2.3.4.1 Primary Voltage

The primary voltage to be used will be determined by Milton Hydro for both Milton Hydro-owned and Customer-owned transformation. Depending on what voltage of the plant that “lies along”, the preferred primary voltage will be at 27.6/ 16 kV grounded wye, three phase, four-wire system. However, in the other sections of the town the primary voltage will be 13.8/8 kV grounded wye, three phase, four wire; or 8.32/4.8 kV three phase, four wire, or 4.16/2.4 kV three phase, four wire.

#### 2.3.4.2 Secondary Supply Voltage

Depending on what voltage of plant “lies along” Milton Hydro’s distribution system, the preferred secondary voltage will be at one of the following:

- 120/240 V, single phase, 3 wire;
- 120/208 V, three phase, 4 wire
- 347/600 V, three phase, 4 wire.

At present, 600 volts, three phase, 3 wire exists in certain areas and the Customer may be required to accept this 3 wire system if he desires connection in this area.

The limit of supply capacity for any Customer is governed by the Supply Voltage. General guidelines for supply from overhead street circuits are as follows:

- a) at 120/240 V, single phase – supply up to 167 kVA demand load, or
- b) at both 120/240 V, single phase and 600 V, three phase, or 347/600 V, three phase,

four wire – supply up to 3x167 kVA sum total demand load, or

c) 120/208 V, three phase, four wire – supply up to 3x167 kVA demand load,

OR

Where street circuits are buried, the Supply Voltage and limits will be determined upon application to Milton Hydro.

OR

Currently Milton Hydro will provide a padmount transformer on private property;

a) at 120/240 V, single phase, supply is available up to 167 kVA, or

b) at 208/120 V, three phase, four wire, supply is available for loads up to 2000 kVA demand load, or

c) at 600/347 V, three-phase, four-wire, supply is available for loads up to 2000 kVA demand load,

OR

**Transformer vault on private property is subject to Milton Hydro Approval. Although Milton Hydro prefers padmount transformer installations as outlined above, transformer vault installations are not precluded.**

**Subject to the operating requirements of Milton Hydro's distribution system, Milton Hydro will consider supply voltages and demands other than those outlined above. The customer may be required to supply, own and maintain the installation.**

### 2.3.5 Voltage Guidelines

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

Milton Hydro maintains service voltage at the Customer's service entrance within the guidelines of C.S.A. Standard CAN3-C235-87 (latest edition).

Where voltages lie outside the indicated limits (Section 5.1 ) for Normal Operating Conditions but within the indicated limits for Extreme Operating Conditions, improvement or corrective action will be taken on a planned and programmed basis, but not necessarily on an emergency basis. Where voltages lie outside the indicated limits for Extreme Operating Conditions, improvement or corrective action will be taken on an emergency basis. The urgency for such action will depend on many factors such as the location and nature of load or circuit involved, the extent to which limits are exceeded with respect to voltage levels and duration, etc.

Milton Hydro shall practice reasonable diligence in maintaining voltage levels, but is not responsible for variations in voltage from external forces such as operating contingencies, exceptionally high loads and low voltage supply from the transmitter or host Distributor. Milton Hydro shall not be liable for any delay or failure in the performance of any of its

obligations under this Conditions of Supply due to any events or causes beyond the reasonable control of Milton Hydro, including, without limitation, severe weather, flood, fire, lightning, other forces of nature, acts of animals, epidemic, quarantine restriction, war, sabotage, act of a public enemy, earthquake, insurrection, riot, civil disturbance, strike, restraint by court order or public authority, or action or non-action by or inability to obtain authorization or approval from any governmental authority, or any combination of these causes (“Force Majeure”).

### 2.3.6 Back-up Generators

Distributors should include the following statements in this section:

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

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

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

Customers with portable or permanently connected generation capability used for emergency back-up shall comply with all applicable criteria of the Ontario Electrical Safety Code. In particular, the Customer shall ensure that Customer's emergency generation does not parallel with Milton Hydro's system without a proper interface protection and does not adversely affect Milton Hydro's distribution system.

Customers with permanently connected emergency generation equipment shall notify Milton Hydro regarding the presence of such equipment.

### 2.3.7 Metering

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

The Customer will provide a convenient and safe location, reserved solely for metering equipment, with outside access acceptable to Milton Hydro and the Electrical Safety Authority, for the installation of Milton Hydro revenue metering equipment, free of charge or rent.

For Retail settlement and billing purposes, Milton Hydro shall provide, install, own and maintain a Meter Installation for all Customers except where the Customer elects to be a Wholesale Market Participant. The type of metering will be based on the Customer's Rate class, energy consumption and peak load. The security and accuracy of metering will be maintained under Regulations and standards established by Measurement Canada and Milton Hydro.

Where wireless communications are not practical, as determined by Milton Hydro, the Customer shall permit Milton Hydro to connect a revenue meter through the Customer's analog phone line for data transfer. Milton Hydro will make a reasonable effort to minimize the adverse impacts of the revenue meter.

### **2.3.7.1 General**

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

Milton Hydro will typically install metering equipment on the Customer secondary supply voltage. The Customer must provide a convenient and safe location satisfactory to Milton Hydro, for the installation of meters, wires and ancillary equipment. Meters for new or upgraded residential services will be mounted outdoors on a meter socket approved by Milton Hydro.

Customers will allow only a properly identified employee or authorized agent of Milton Hydro to remove, inspect, connect, adjust, or repair Milton Hydro metering, service entrance equipment, communications equipment, or other plant located on the Customer's premises.

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

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

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

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

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

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

### **2.3.7.2 Multi-Unit Sites**

Milton Hydro will provide a single, bulk-metered point for all multi-unit sites.

Customers wishing to have multi-unit sites equipped with individual tenant metering may install their own additional meters or sub-metering systems. Owners of sub-metering systems, or any other electricity meters used for revenue billing purposes must register as a contractor with Measurement Canada and ensure that all regulatory requirements are met.

Milton Hydro will allow individual metering for multi-unit buildings that are equipped with a "hall" meter.

Customers of residential type townhouse will be individually metered

### **2.3.7.3 Main Switch and Meter Mounting Devices**

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

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

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

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

The Customer is required to supply and install a meter cabinet to contain Milton Hydro's metering equipment for the supply voltages listed in Section 5.2 appended to these Conditions.

#### **2.3.7.4 Service Mains Limitations**

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.

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

#### **2.3.7.5 Special Enclosures**

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

#### **2.3.7.6 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 Milton Hydro prior to installation. 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 Milton Hydro prior to installation.

#### **2.3.7.7 Barriers**

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

#### **2.3.7.8 Doors**

Side-hinged doors shall be installed over all live electrical equipment where Milton

Hydro personnel may be required to work (i.e. line splitters, unmetered sections of switchgear, breakers, switches, metering compartments, meter cabinets and enclosures).

These hinged doors shall have provision for sealing and padlocking. Where bolts are used, they shall be of the captive knurled type.

All outer-hinged doors shall open no less than 135°. All inner hinged doors shall open to a full 90°.

### **2.3.7.9 Auxiliary Connections**

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

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

### **2.3.7.10 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.

### **2.3.7.11 Current Transformer Boxes**

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

Where instrument transformers are incorporated in low voltage switchgear, a drawing of the switchgear is to be submitted to Milton Hydro for approval prior to installation. A separate meter cabinet must be supplied and installed by the Customer, located to the satisfaction of Milton Hydro and as close as possible to the instrument transformer compartment.

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

The meter cabinet shall be grounded by a minimum #6 copper grounding conductor, not installed in the above conduit. The Customer shall install a strong nylon or polyrope pull line in the conduit, with an excess of 1500 mm loop left at each end.

The final layout and arrangements of components must be approved by Milton Hydro

prior to fabrication of equipment.

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

### **2.3.7.12 Interval Metering**

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

Interval meters are required for all new Residential and General Service Classes connections or upgraded (General Service Classes only) services. Where wireless communications are not practical, as determined by Milton Hydro, the interval meter will be connected to the Customer's analog phone line for data transfer or the Customer will arrange for the installation of a separate telephone line, terminated next to the interval meter for the exclusive use of Milton Hydro to retrieve interval meter data. The shared use or exclusive use (separate telephone line) of the customer's telephone line will be at no cost to Milton Hydro. The Customer will be responsible for the installation and ongoing monthly costs of operating the phone line. The phone line will be analog direct dial voice quality, active 24 hours per day, and energized prior to meter installation.

### **2.3.7.13 Meter Reading**

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

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

If meter reading cannot be obtained during the customer's reading cycle, an off-cycle meter read will be arranged within 5 days and the customer will be subject to an off-cycle meter reading charge in accordance with Milton Hydro's approved rates.

### **2.3.7.14 Final Meter Reading**

This section should outline any requirements associated with

obtaining a final meter reading on termination of a contract for service.

When a service is no longer required, the Customer shall provide at least 48 hours notice of the date the service is to be discontinued so that Milton Hydro can obtain a final meter reading as close as possible to the final reading date. The Customer shall provide access to Milton Hydro 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.

### **2.3.7.15 Faulty Registration of Meters**

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

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

In the event of incorrect electricity usage registration, Milton Hydro 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 energy supplied, a reasonable sum based on the reading of any meter formerly or subsequently installed on the premises by Milton Hydro, due regard being given to any change in the characteristics of the installation and/or the demand. If Measurement Canada determines that the Customer was overcharged, Milton Hydro 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. Milton Hydro will correct the bills for that period in accordance with the regulations under the *Electricity and Gas Inspection Act*.

### **2.3.7.16 Meter Dispute Testing**

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

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

Either Milton Hydro or the Customer may request the service of Measurement Canada to

resolve a dispute. If the Customer initiates the dispute, Milton Hydro may charge the Customer a meter dispute fee if the meter is found to be accurate and Measurement Canada rules in favor of the utility.

## 2.4 Tariffs and Charges

### 2.4.1 Service Connection

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

Charges for distribution services are set out in the Schedule of Rates and Charges available upon request from Milton Hydro or as posted on its website at [www.miltonhydro.com](http://www.miltonhydro.com). Notice of Rate revisions shall be published in major local newspapers. Information about changes will also be mailed to all Customers with the first billing issued at revised rates.

#### **2.4.1 Expansion Deposits & Agreements**

Where an owner proposes the development of premises that require Milton Hydro to place orders for equipment for a specific project and before actual construction begins, the owner is required to sign the necessary Supply Agreement and furnish a suitable expansion deposit based on estimated cost of labour and material supplied by Milton Hydro before such equipment is ordered by Milton Hydro.

For expansions that require a capital contribution, Milton Hydro may require the customer to provide an expansion deposit for up to 100% of the present value of the forecasted revenues as described in Appendix B of the DSC. For expansions that do not require a capital contribution, Milton Hydro may require the customer to provide 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. The expansion deposit shall cover both the forecast risk (the risk associated with whether the projected revenue for the expansion will materialize as forecasted) and the asset risk (the risk associated with ensuring that the expansion is constructed, that it is completed to the proper design and technical standards and specifications, and that the facilities operate properly when energized) related to the expansion.

If the alternative bid option was chosen, Milton Hydro shall retain and use the expansion deposit to cover Milton Hydro's costs complete, repair, or bring the facilities up to standard; to ensure that the expansion is completed to the proper design, technical

standards and specifications, and that the facilities operate properly when energized.

Once the facilities are energized, Milton Hydro annually return the percentage of the expansion deposit in proportion to the actual connections (for residential developments) and actual demand (for commercial and industrial developments) that materialized in that year. For example, if twenty percent of the forecasted connections or demand materialized in that year, then Milton Hydro shall return to the customer twenty percent of the expansion deposit.) This annual calculation shall only be done for the duration of the customer connection horizon as defined in Appendix B of the DSC. If at the end of the customer connection horizon the forecasted connections (for residential developments) or forecasted demand (for commercial and industrial developments) have not materialized, Milton Hydro shall retain the remaining portion of the expansion deposit.

If the alternative bid option was chosen, Milton Hydro may retain up to ten percent of the expansion deposit for a warranty period of up to two years. This portion of the expansion deposit can be applied to any work required to repair the expansion facilities within the two year warranty period. The two year warranty period begins:

- a) when the last forecasted connection in the expansion project materialized (for residential developments) or the last forecasted demand materialized (for commercial and industrial developments); or
- b) at the end of the customer connection horizon as defined in Appendix B of the DSC

whichever is first. Milton Hydro shall return any remaining portion of this part of the expansion deposit at the end of the two year warranty period.

Any required expansion deposit shall be in the form of cash, letter of credit from a bank as defined in the Bank Act, or surety bond. Milton Hydro shall allow the customer to select the form of the expansion deposit.

Where any expansion deposit is in the form of cash, Milton Hydro shall return the expansion deposit to the customer together with interest in accordance with the following conditions:

- a) interest shall accrue monthly on the expansion deposits commencing on receipt of the total deposit required by Milton Hydro; and
- b) the interest rate shall be at the Prime Business Rate set by the Bank of Canada less 2 percent.

## 2.4.2 Energy Supply

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

Provision of Standard Service Supply to the Customer, per the rules and regulations laid out in the Retail Settlement Code and the Standard Service Supply Code.

Provision of Supply to the Customer through a Retailer, per the rules and regulations laid out in the Retail Settlement Code.

Wheeling of energy and all associated tariffs.

### 2.4.2.1 Standard Service Supply (SSS)

All existing Milton Hydro Customers are Standard Service Supply (SSS) Customers until Milton Hydro is informed of and completes its switch to a competitive electricity supplier. The Service Transfer Request (STR) must be made by the Customer or the Customer's authorized retailer.

### 2.4.2.2 Retailer Supply

Milton Hydro remains obligated to provide Distribution Services to Retailer supplied customers in accordance with these Conditions of Service.

Customers transferring from Standard Service Supply (SSS) to a retailer shall comply with the Service Transfer Request (STR) requirements as outlined in sections 10.5 through 10.5.6 of the Retail Settlement Code.

All requests shall be submitted as electronic file and transmitted through the EBT system. Service Transfer Request (STR) shall contain information as set out in section 10.3 of the Retail Settlement Code.

If the information is incomplete, Milton Hydro will reject the Service Transaction Request (STR) with appropriate information on the nature of the rejection.

### 2.4.2.3 Wheeling of Energy

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

### 2.4.3 Security Deposits

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

All Customers must meet Milton Hydro's security deposit policy as outlined in Section 3.7.11. Milton Hydro reserves the right to amend the policy from time to time.

### 2.4.4 Billing

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

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

Retailer Customers may be billed by either Milton Hydro or the Retailer depending on the billing options selected by the Retailer in accordance with the Retail Settlement Code.

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

### 2.4.5 Payments and Overdue Account Interest Charges

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

Bills are rendered for energy services provided to the Customer. Customers may pay their electricity bills using any of the following methods: cheque or money order mailed or dropped off at addresses on the stub; telebanking or Internet bill payment services as offered through their financial institution; through Milton Hydro's pre-authorized payment option.

Bills are payable in full by the due date; otherwise, overdue interest charges will apply as outlined in the approved Schedule of Rates posted on [www.miltonhydro.com](http://www.miltonhydro.com). Where a partial payment has been made by the Customer on or before the due date, the interest

charge will apply only to the amount outstanding at the due date. In the event of partial payment by a Customer, payments shall be allocated by the portions of the bill covering competitive and non-competitive electricity costs based on the ratios of the amount billed for competitive and non-competitive costs.

Outstanding bills are subject to the collection process and may ultimately lead to the service being discontinued.

## 2.5 Customer Information

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

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

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

Milton Hydro shall not disclose Customer information to a third party without the consent of the Customer in writing, except where Customer information is required to be disclosed, as follows:

- (a) for billing or market operation purposes;
- (b) for law enforcement purposes;
- (c) for the purpose of complying with a legal requirement; or,
- (d) for the processing of past due accounts.

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

Milton Hydro 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. Milton Hydro may charge a fee that has been approved by the OEB for all other requests for aggregated information.

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

## 3 CUSTOMER CLASS SPECIFIC

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

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

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

### 3.1 Residential Service

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

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

Where the residential dwelling comprises the entire electrical load of a farm, it is defined as a residential service. Where the residential dwelling does not comprise the entire electrical load of the farm:

- The service will be defined as a General Service if the occupant derives his/her principal livelihood from the working of the farm;
- The service will be defined as a Residential Service if the occupant does not

derive his/her principal livelihood from the working of the farm;

Where the residential farm dwelling is supplied by one separately metered service and the electrical loads in other buildings are supplied by a different separately metered service, then the former is defined as a Residential Service and the latter is defined as a General Service.

It applies to new services and upgrades. Further, it applies only to buildings that meet the following conditions:

- The building lies along a distribution line; and
- The building can be connected without an expansion or enhancement to the distribution system.

### 3.1.1 General Information

There shall be only one service to a building except for semi-detached buildings. For semi-detached buildings with required fire separation, there may be two services.

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

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.

Residential customers requesting service will be asked to provide Milton Hydro with their full name, present and previous addresses, telephone number, and other pertinent data as outlined in Section 2.5 .

### 3.1.2 Early Consultation and Notification

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. This shall apply for the installation of a new service and the upgrading of an existing service. At the time the request is made, 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 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.

### 3.1.3 Point of Demarcation

The Ownership Demarcation Point for a residential service is as follows:

- for Overhead services, not requiring transformation facilities on private property, it is the top of the Customer's service mast;
- for Overhead services, requiring transformation facilities on private property, it is the point of attachment at Milton Hydro's distribution line;
- for Underground services, not requiring transformation facilities on private property, it is the line side of the Customer's meter base;

### 3.1.4 Access

The Customer will provide unimpeded and safe access to the distributor at all times for the purpose of installing, removing inspecting, maintaining, reading, operating or changing metering and distribution equipment.

### 3.1.5 Inspection

All Customer-owned electrical equipment must be inspected and approved in accordance with Electrical Safety Authority requirements. Milton Hydro requires the Customer to obtain connection authorization from the Electrical Safety Authority prior to energization by Milton Hydro.

### 3.1.6 Overhead Services for Residential Service

#### 3.1.6.1 Minimum Requirements

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

- a) A clevis type insulator is to be supplied and installed by the Customer.
- b) This point of attachment device must be located:

- i. Not less than 4.5 metres (15 feet) nor greater than 5.5 metres (18 feet) above grade (to facilitate proper ladder handling techniques). Building must have a minimum offset from property line of 1.2 metres (4 feet).
  - ii. Between 150 millimetres and 300 millimetres (6-12 inches) below the service head.
  - iii. Within 914 millimetres (3 feet) of the face of the building.
- c) Clearance must be provided between utility conductors and finished grade of a least 6 metres (19 feet) over traveled portions of the road allowance and 4.5 metres (15 feet) over all other areas.
 

A minimum horizontal clearance of 1.0 metres (39 inches) must be provided from utility conductors and any second storey windows.
- d) A large, 4 jaw meter socket of an approved manufacturer (Section 5.3 ) shall be provided. Certain areas will require a 5-jaw socket as determined by Milton Hydro. The Customer should contact Milton Hydro to confirm details.
- e) Clear unobstructed access must be maintained to and in front of the meter location.
- f) Service locations requiring access to adjacent properties (mutual drives, narrow side set-backs, etc.) will require the completion of an easement or written consent from the property owner(s) involved.
- g) The approved meter base shall be mounted directly below the service mast such that the midpoint of the meter is 1.73 m ( $\pm$  100 mm) above finished grade within 1.0 m of the face of the building (in front of any existing or proposed fence), unless otherwise approved by Milton Hydro.

### 3.1.6.2 Services Over Swimming Pools

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

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

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

### 3.1.7 Underground Services for Residential Service

Customers requesting an underground service in an overhead area will be required to pay 100% connection costs for the underground service less the Standard Allowance for an overhead service.

The owner shall pay for any necessary road crossings.

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

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

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

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

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

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

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

## 3.2 General Service (Below 50 kW)

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

All non-residential Customers with an average peak demand below 50 kW over the past twelve months are to be classified as General Service (Below 50 kW). For new Customers without prior billing history, the peak demand will be based on the customer's proposed capacity.

This section refers to General Service Customers (Below 50 kW) that meet the following conditions:

The building lies along a distribution line;

- The building can be connected without an expansion or enhancement to the distribution system; and
- The service entrance equipment is rated at one of the following
  - 120/240 V 400 amps or less
  - 120/208 V 600 amps or less
  - 347/600 V 200 amps or less

### 3.2.1 General Information

See Section 2.3.4 for standard voltages available from Milton Hydro. The Customer shall obtain the prior approval from Milton Hydro for the use of any specific voltage at any specific location.

This section applies to new services and upgrades.

Where practical there shall be only one Point of Entry to each land parcel. At the request of the Customer, Milton Hydro, at its discretion, may allow more than one Point of Entry. If Milton Hydro is required to supply and install extra lines and equipment to allow more than one Point of Entry, then the extra lines and equipment will be considered as an expansion to the distribution system and, as such, Milton Hydro will require that the Customer contribute an amount equal to that allowed by the Distribution System Code.

There shall be only one service to a building.

In circumstances where multiple services are installed to a General Service Customer 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 obstacles in order to facilitate regular and emergency maintenance. Obstructions may include vegetation, structures and landscaping. Removal of any obstruction by Milton Hydro will be at the expense of the property owner.

### 3.2.2 Early Consultation and Notification

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. This shall apply for the installation of a new service and the upgrading of an existing service. At the time the request is made, 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 Milton Hydro will gain 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; and
- all information required to set up a billing account.

### 3.2.3 Point of Demarcation

The Ownership Demarcation Point for a General Service Customer (Below 50 kW) is as follows:

- for Overhead single service, not requiring transformation facilities on private property, it is to the secondary bushing of Milton Hydro's transformer;
- for Overhead services, requiring transformation facilities on private property, it is the point of attachment to Milton Hydro's distribution line;
- for Underground services, not requiring transformation facilities on private property, it is to the secondary bushing of Milton Hydro's transformer;

The Operational Demarcation Point for a General Service Customer (Below 50 kW) is as follows:

- For both overhead and underground services, it is at the meter base or the disconnect switch, whichever comes first. The disconnect switch must come first in most instances, with the exception being small single phase services up to 200 amperes and pole mounted central meters.

### 3.2.4 Location of Service Equipment

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

### 3.2.5 Construction Responsibilities

- a) The Customer shall construct or install all civil infrastructure (including but not limited to poles, UG conduits, cable chambers, cable pull rooms, transformer room/vault/pad) on private property that is deemed required by Milton Hydro as part of its Connection Assets. All civil infrastructure are to be in accordance with Milton Hydro's current standards, practices, specifications and this Conditions of Service and are subject to Milton Hydro's inspection and acceptance.
- b) Should the Customer complete the civil infrastructure related to connection assets, Milton Hydro would not include the associated civil component in its calculation of Basic and Variable Connection Fees.
- c) Alternatively, the Customer may have Milton Hydro complete the civil infrastructure that forms part of Milton Hydro's Connection Assets on private property and the Customer will therefore be responsible for all costs via Basic Connection and Variable connection Fees (as applicable).
- d) Milton Hydro is responsible for the maintenance and repairs of its Connection Assets but not the Transformer Room(s) or any other civil structure that forms part or is part of the Customer's building.
- e) When effecting changes, the Customer shall maintain sufficient clearances between electrical equipment and Buildings and other permanent structures to meet the requirements of the Ontario Electrical Safety Code and the Occupational Health & Safety Act and Regulations.
- f) It is the responsibility of the owner or his/her contractor to obtain clearances from all of the utility companies (including Hydro) before digging.

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

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

### 3.2.6 Access

The Customer will provide unimpeded and safe access to the distributor at all times for the purpose of installing, removing inspecting, maintaining, reading, operating or changing metering and distribution equipment.

The electrical room must be located to provide safe access from the outside or main hallway, and not from an adjoining room, so that it is readily accessible to Milton Hydro's employees and agents at all hours to permit meter reading and to maintain electric supply. This room must be locked at all times. The owner shall install a Milton Hydro provided lockset. 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.

### 3.2.7 Inspection

All Customer-owned electrical equipment must be inspected and approved in accordance with Electrical Safety Authority requirements. Milton Hydro requires the Customer to obtain connection authorization from the Electrical Safety Authority prior to energization by Milton Hydro.

### 3.2.8 Electrical Requirements (as applicable)

For low voltage supply, the Customer's cables shall be brought to a point determined by

Milton Hydro for connection to Milton Hydro's supply.

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

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

Electrical rooms 'on' or 'below' grade must have a drain including a "P" trap complete with a non-mechanical priming device and a backwater valve connected to the sanitary sewer. The electrical room floor must slope 6-mm/300 mm or 2% towards the drain.

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

### 3.2.9 Underground Service Requirements

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

The Customer is responsible to maintain all its structural and mechanical facilities on private property in a safe condition satisfactory to Milton Hydro. This includes the transformer base and the grounding, but does not include the transformer if it is supplied by Milton Hydro.

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

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

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

### 3.2.10 Temporary Services (other than Residential)

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

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

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

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

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

### 3.3 General Service (Above 50 kW to 1000 kW)

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

All non-residential Customers with an average peak demand between 50 kW and 999 kW over the past twelve months are to be classified as General Services above 50 kW. For new Customers without prior billing history, the peak demand will be based on the customer's proposed capacity.

This section refers to General Service Customers (Above 50 kW) that meet the following conditions:

- the building lies along a distribution line;
- the building can be connected without an expansion or enhancement to the distribution system; and
- the Service Entrance equipment is rated at one of the following:

120 / 240 V 800 Amperes or less  
120 / 208 V 3000 Amperes or less  
347 / 600 V 1200 Amperes or less

For General Services (above 50 kW) that have the following service sizes, see Section 3.2 above:

120 / 240 V 400 Amperes or less  
120 / 208 V 600 Amperes or less  
347 / 600 V 200 Amperes or less

For other general information, see Section 3.2.1.

### 3.3.1 Transformation – Utility Owned

#### 3.3.1.1 General Information

Milton Hydro will provide transformation according to the capacity limits indicated in Section 2.3.4. Unless noted otherwise, transformation will be on the Customer's property, and on foundations or in transformer rooms supplied by the Customer. Milton Hydro will determine the size of the transformer that it will supply.

When transformation is supplied by Milton Hydro, it must be located within 3m (10 feet) of an accessible roadway capable of carrying heavy trucks. This roadway is to facilitate the installation, repair or replacement of the transformer by Milton Hydro personnel. This roadway, when required, will be installed and maintained by the Customer.

#### 3.3.2 Electrical 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 Milton Hydro, to house the necessary transformer(s) and/or switching equipment. Milton Hydro 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 Milton Hydro's employees and agents at all hours to permit meter reading and to maintain electric supply. This room must be locked. The owner shall install a Milton Hydro provided lockset. 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.

### 3.3.3 Technical Information

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

Prior to the preparation of a design for a service, the Customer will provide the following information to Milton Hydro including the approximate date that the Customer requires the electrical service and the due date that Milton Hydro'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, et cetera.

### **3.3.3.3 Floor Plan**

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

### **3.3.3.4 Duct Bank Location**

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

### **3.3.3.5 Transformer Location**

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

### **3.3.3.6 Electrical Meter Room**

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

### **3.3.3.7 Single Line Diagram**

Show the main service entrance switch capacity, the required supply voltage, and the number and capacity of all sub-services showing provision for metering facilities, as well as the connected load breakdown for lighting, heating, ventilation, air conditioning et cetera. Also, indicate the estimated initial kilowatt demand and ultimate maximum demands. Provide protection equipment information where coordination is required between Milton Hydro and Customer owned equipment. Fusing will be determined later by Milton Hydro to co-ordinate with the transformer size selected.

### **3.3.3.8 Switchgear**

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

### **3.3.3.9 Substation Information**

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

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

## **3.3.4 Technical Considerations**

### **3.3.4.1 Short Circuit Ratings**

- 16000/27600 V Supply: The Customer's protective equipment shall have a three phase, short circuit rating of 750 MVA symmetrical. The asymmetrical current is 25,100 A (1.6 factor used).
- 8000/13800 V Supply: The Customer's protective equipment shall have a three phase, short circuit rating of 500 MVA symmetrical. The asymmetrical current is 33,500 A (1.6 factor used.)
- 600/347 V Supply: Available short circuit current may be obtained upon request to Milton Hydro.
- 208/120 V Supply: Available short circuit current may be obtained upon request to Milton Hydro.

### **3.3.4.2 Primary Fusing**

All equipment connected to the Milton Hydro's distribution system shall satisfy the short circuit ratings specified in Section 3.3.4.1. The Customer and/or the Customer's consultant shall specify the fuse link rating and demonstrate coordination with Milton Hydro's upstream protection including station breakers and/or distribution fuses. The

Customer shall submit a coordination study to Milton Hydro for verification to ensure coordination with upstream protection including station breakers and/or distribution fuses. The Customer shall maintain an adequate supply of spare fuses to ensure availability for replacement in the event of a fuse blowing.

#### **3.3.4.3 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) 8000/13800 - 95 kV B.I.L.
- c) 16000/27600 - Delta primary 150 kV B.I.L.
- d) 16000/27000 - Grounded Wye primary 125 kV B.I.L.

#### **3.3.4.4 Unbalanced Loads**

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

#### 3.3.5 Early Consultation and Notification

See Section 3.2.2

#### 3.3.6 Point of Demarcation

See Section 3.2.3

#### 3.3.7 Location of Service and Equipment

See Section 3.2.4

#### 3.3.8 Access

See Section 3.2.6

#### 3.3.9 Inspection

See Section 3.2.7.

### **3.4 General Service (Above 1000 kW)**

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

All non-residential Customers with an average peak demand of 1000 kW or higher over the past twelve months are to be classified as Customers over 1000 kW. For new Customers without prior billing history, the peak demand will be based on the customer's proposed capacity.

This Section refers to the supply of electrical energy to buildings housing General Service customers with electrical loads greater than 1000 kW and that meet the following conditions:

- the building can be connected without an expansion or enhancement to the distribution system; and
- the Service Entrance equipment is rated at one of the following:
  - 120 / 208 V greater than 3000 Amperes
  - 347 / 600 V greater than 1200 Amperes

#### 3.4.1 Primary Services in Overhead Distribution Areas

A variable connection charge will be levied where the connection is beyond the Standard Allowance.

The Customer will not be allowed to install their underground primary cables up Milton Hydro poles. The Customer is required to supply, install and maintain a dip pole on Customer property.

#### 3.4.2 Primary Services in Underground Distribution Area

A variable connection charge will be levied where the connection is beyond the Standard Allowance.

##### **3.4.2.1 Transformation – Utility Owned**

See Section 3.3.1

##### **3.4.2.2 Transformation – Customer Owned**

For accounts that are not primary metered, transformation supplied by the Customer is

required to have an impedance no greater than 5.5%. If the impedance is greater than this amount, the Customer will be required to pay an additional amount on each bill to compensate for the cost of the increased electrical losses which will result.

### 3.4.3 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 Milton Hydro's requirements for high voltage installations. Milton Hydro will provide planning details upon application for service.

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

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

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

The Customer and Milton Hydro shall inspect their own respective substations in accordance with the Distribution System Code. The minimum inspection cycles for Customer specific substations are one year for open substations and three years for enclosed substations. To facilitate and encourage the maintenance of this equipment, Milton Hydro 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 would be scheduled during Milton Hydro's normal business hours, Monday to Friday, and are not necessarily guaranteed. Milton Hydro will charge Customers for power interruptions arranged at times other than as outlined above.

### 3.4.4 Technical Information and Considerations

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

### 3.4.5 Early Consultation and Notification

See Section 3.2.2

### 3.4.6 Point of Demarcation

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

- for overhead services, it is the connection point to Milton Hydro’s distribution line; and
- for underground services in underground areas, it is the connection point at the secondary bushings of Milton Hydro’s transformer.

The Operational Demarcation Point for a general service Customer, in this section, is at the supply side of the primary switch.

### 3.4.7 Location of Service and Equipment

See Section 3.2.4

### 3.4.8 Access

See Section 3.2.6

### 3.4.9 Inspection

See Section 3.2.7

## 3.5 Embedded Generation

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

The Distribution System Code (OEB website at <http://www.oeb.gov.on.ca>) provides for the standardization of connection processes, size categories and the time frames for connecting embedded generation facilities to the distribution system. These categories are as described below.

Generator Classification	Rating
Micro	$\leq 10$ kW
Small	(a) $\leq 500$ kW connected on distribution system voltage $<15$ kV (b) $\leq 1$ MW connected on distribution system voltage $\geq 15$ kV

Mid-Sized	(a) $\leq 10$ MW but $> 500$ kW connected on distribution system voltage $< 15$ kV (b) $> 1$ MW but $\leq 10$ MW connected on distribution system voltage $\geq 15$ kV
Large	$\geq 10$ MW

The connection and operation of a Customer's embedded generator must not endanger workers or jeopardize public safety, or adversely affect or compromise equipment owned or operated by Milton Hydro, or the security, reliability, efficiency and the quality of electrical supply to other Customers connected to Milton Hydro's distribution system. If damage or increased operating costs result from a connection with a generator, Milton Hydro shall be reimbursed for these costs by the generator.

When an embedded generator is connected to Milton Hydro's distribution system, the Customer shall provide an interface protection that minimizes the severity and extent of disturbances to Milton Hydro's distribution system and the impact on other Customers. The interface protection shall be capable of automatically isolating the generator(s) from Milton Hydro's distribution system for the following situations:

- Internal faults within the generator.
- External faults in Milton Hydro's distribution system.
- Certain abnormal system conditions, such as over/under voltage, over/under frequency

The Customers shall disconnect the embedded Generator from Milton Hydro's distribution system when:

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

The Customer must also comply with the detailed requirements outlined in the document "Milton Hydro General Requirements for Parallel Generation".

### 3.5.1 Introduction

Customers of Milton Hydro may choose to supply some or all of their electrical energy needs through the installation of an on-site, Customer-owned generation facility. Milton Hydro will provide non-discriminatory access to its distribution system for a generator,

and will make every effort to respond promptly to a generator's request for connection. For the purposes of this document, a generator that requests connection to the Milton Hydro distribution system will be referred to as an "Embedded Generator".

This guideline outlines the typical technical requirements and procedural activities required of a prospective Embedded Generator of 10 MVA or less to connect to the Milton Hydro electrical distribution system to ensure safe and reliable distribution system operations. Generation facilities of 10 MVA or higher will be reviewed on a case-by-case basis, as these will require a greater degree of difficulty for connection, and significantly higher costs. This guideline also ensures that Milton Hydro and the Embedded Generator comply with the requirements of the Ontario Energy Board Distribution System Code, Section 6.2, the Milton Hydro Conditions of Service, and the Ontario Electrical Safety Code, Section 84. The Distribution System Code is available on the OEB website at <http://www.oeb.gov.on.ca>

This guideline focuses on protections required to detect and isolate the generator from the Milton Hydro distribution system when faults/disturbances occur on the distribution system, to protect the Milton Hydro system and other Customers on the distribution system. The Embedded Generator should consider these typical protection requirements when preparing the proposed protection package for Milton Hydro review; however, **this guide is not intended to take the place of a detailed final design**. A detailed final design should be completed by a competent person or organization, and should include consideration of proposed power and protective equipment, and local conditions, including existing and future equipment loading and operating conditions.

### 3.5.2 Milton Hydro Distribution System

Hydro One owns the high-voltage transmission system and transformation facility that supplies power to Milton Hydro at the 27.6 / 16 kV levels which, in turn, Milton Hydro distributes to various Customers throughout their electrical distribution system. Because of this arrangement, an Embedded Generator must also comply with Hydro One requirements for connection, as an embedded generator could have a serious impact on the Hydro One system under fault conditions.

It is assumed that the embedded generating facility will be designed, constructed, owned and operated by a developer independent of Milton Hydro. All embedded generator interconnection arrangements must be acceptable to and approved by Milton Hydro and, for some specific relay protection areas, by Hydro One.

An Embedded Generator facility that includes a generation unit rated at 10 MVA or higher, or whose embedded generation facility is comprised of generation units whose net output is greater than 50 MVA, will require approval of the Independent Electricity Market Operator (IESO). Such a facility must meet the applicable IESO performance standards identified in Chapter 4 of the "Market Rules for the Ontario Electricity Market". These rules are available on the IESO website at [www.theIESO.com](http://www.theIESO.com).

### 3.5.3 Milton Hydro Utility Practices

The major elements of a utility connection for an embedded generation facility include a circuit breaker for fault current interruption, a transformer for matching the generator and utility system voltages, and a connecting line to the utility facilities. Control, metering and protective relaying facilities are also necessary for both the Embedded Generator and Milton Hydro operations. Milton Hydro will have operating control of the circuit breaker at the interface between the Embedded Generator and the Milton Hydro distribution system

Protection systems are required at the generation facility, and these protection systems must be capable of automatically isolating the Embedded Generator from the Milton Hydro system. The Embedded Generator should provide protection systems to cover the following conditions:

- internal faults (i.e., faults within the Embedded Generator);
- external faults (i.e., faults on the Milton Hydro system to which the Embedded Generator is connected);
- certain abnormal system conditions that could result in Embedded Generator islanding (e.g., conditions where the Embedded Generator becomes separated from the Milton Hydro system, along with some load); and
- additional protection features, such as Remote Trip or Voltage Supervision, may be required in some applications.

The purpose of the connection and protection requirements outlined in this guide is to:

- consider the health and safety of the general public and of Milton Hydro employees in the performance of their duties;
- preserve the security and reliability of the Milton Hydro and Hydro One distribution systems;
- preserve acceptable quality of the electrical supply to other Milton Hydro Customers; and
- ensure operating flexibility during normal or emergency conditions.

Once a prospective Embedded Generator Customer decides to proceed with the installation of a generation facility, they will be responsible to reimburse the cost reasonably incurred by Milton Hydro in making an offer to connect a generator. The amount that Milton Hydro may charge an Embedded Generator to construct the expansion to connect a generator to the Milton Hydro distribution system shall not exceed the generator's share of the present value of the projected capital costs and on-going maintenance costs for the equipment. Projected revenue and avoided costs from the generator shall be assumed to be zero unless otherwise determined by rates approved by the Ontario Energy Board. The economic methodology and inputs that Milton Hydro will follow are presented in the Milton Hydro Contributed Capital Policy.

Costs that could be reasonably incurred by Milton Hydro include costs associated with:

- preliminary review for connection requirements;
- detailed study to determine connection requirements; and
- final proposal to connect the generator.

This guideline is prepared for one Embedded Generator on a Milton Hydro distribution feeder. If there is a second Embedded Generator to be connected to the same feeder, then total generation versus maximum feeder load must be considered, and the protection package must be designed accordingly. If additional equipment protection is required for the Embedded Generator already connected to the feeder, the second Embedded Generator may be responsible for the modification costs.

An Embedded Generator will be required to comply with all of Section 5.2 of the Distribution System Code in regards to metering requirements for a generating facility. For an OEB-licensed generator connected to the Milton Hydro system that sells energy and settles through the Milton Hydro settlement process, the Embedded Generator must install a four-quadrant interval meter. Milton Hydro will meter Customers with generation that does not require an OEB license, such as back-up capability or generation for load displacement, in the same manner as Milton Hydro other load Customers.

An Embedded Generator that wishes to become connected to the Milton Hydro distribution system must enter into a Connection Agreement with Milton Hydro. This Connection Agreement shall contain specific terms and conditions relating to the connection, operations, maintenance and communications requirements of the generator and Milton Hydro.

#### 3.5.4 Embedded Generator Interconnection Requirements and Procedure

A prospective Embedded Generator must contact Milton Hydro for information and request the form “Application to Connect an Embedded Generator.”

As connection costs are to be paid by the generating facility, most applicants will want to determine the point of connection and expected costs prior to committing the project. This information can only be provided after a preliminary review is conducted by Milton Hydro and Hydro One, based on the information included in the “Application to Connect an Embedded Generator.”

The preliminary review includes a verification of the voltage and power ratings of the Embedded Generator installation to confirm whether they are compatible with those of the distribution system. The impact of the proposed connection on reliability, power quality and equipment and personnel safety will also be assessed. Once the preliminary review is completed, and should the Embedded Generator installation be pursued further, more detailed analysis, specifications and information will need to be provided by the Embedded Generator.

Listed below are the recommended steps involved in proceeding to have an Embedded Generator connect to the Milton Hydro electrical distribution system.

#### **3.5.4.1 Initial Contact and Embedded Generator Interconnection Application**

1. Contact Milton Hydro to identify an interest in connecting a generator to the Milton Hydro electrical distribution system, and obtain the form “Application to Connect an Embedded Generator”, a copy of the Milton Hydro Conditions of Service, and a copy of the Milton Hydro cost recovery policy.
2. Provide Milton Hydro with a written request for connection, along with the completed application form, including the preliminary technical information (two copies) describing the proposed Embedded Generator facility. As a minimum, this would include the following information pertaining to the connection:
  - site location with a scaled map referencing the site relative to existing lot lines, easements, road allowances and power lines, that identifies the facility location;
  - a brief description of the proposed plant design and operating characteristics, including expected monthly peak power and net energy production for each month of the year. If the Embedded Generator intends to purchase power from Milton Hydro to supplement its Embedded Generator production to meet its total plant load, a monthly estimate of this expected purchase should also be provided;
  - short- and long-term site development plans and installation schedule, and the preferred point of connection to the Milton Hydro system;
  - preliminary single-line diagram showing generator(s), transformer(s), grounding arrangements and main isolating devices;
  - type and rating of main isolating device, generator(s) and transformer(s), and nameplate data if available;
  - proposed preliminary relay protection schemes; and
  - proposed revenue-metering equipment (i.e., 4-quadrant interval metering).
3. Once Milton Hydro has received the required information to begin an analysis. Milton Hydro will proceed with a preliminary review of the Embedded Generator connection requirements.

#### **3.5.4.2 Preliminary Review for Connection Requirements**

1. The applicant will be responsible to reimburse Milton Hydro for all reasonable costs incurred in completing the preliminary review.
2. Milton Hydro will review the application and its associated documents and, if insufficient information has been provided, Milton Hydro will advise the Embedded Generator of its requirements, and will put on hold its review until all sufficient data is provided. In general, the preliminary review will be conducted as follows:
  - determine the acceptability of the location and voltage level of connection to the Milton Hydro system;
  - determine the Embedded Generator plant capacity limitations for the proposed connection;
  - confirm that the voltage and power ratings of the Embedded Generator installation are compatible with those of the Milton Hydro distribution feeder. Where a mismatch between distribution line and Embedded Generator capacity ratings is revealed, the feeder may require reconductoring or upgrading. To determine this compatibility the following checks will be completed: feeder current rating; surge impedance loading; voltage regulation; reliability; power quality; and safety considerations;
  - depending on the total generation to be connected to the Milton Hydro feeder, and the minimum feeder load, remote trip protection facilities between the transformer station (Hydro One supply) and the Embedded Generator may be required. Milton Hydro and Hydro One will determine if this requirement is necessary.
  - the size of the generator and the Embedded Generator transformer configuration will determine the feeder protection modifications and requirements at the Hydro One supply station. This information will also help to determine any specific connection and equipment requirements, (e.g., requirement for a remote trip protection scheme).
3. Consult with Hydro One on any possible relay protection modifications or additions.
4. Milton Hydro will provide the applicant with a written response to the preliminary review for connection within 30 calendar days of starting the review. Milton Hydro will also provide a preliminary cost estimate to the applicant for connecting the generator to the distribution system. A more detailed estimate can only be provided after a detailed connection review is completed.
5. If the proposed Embedded Generator finds the preliminary review acceptable, they must confirm acceptance in writing to Milton Hydro, and request that Milton Hydro proceed with a detailed review. The Embedded Generator must commit to

reimburse Milton Hydro all reasonable costs incurred in completing the detailed review.

### 3.5.4.3 Detailed Study to Determine Connection Requirements

The complete detailed engineering package, including relay settings, must be submitted to Milton Hydro before the detailed review can proceed. Milton Hydro will provide the Embedded Generator with an offer to connect within 60 calendar days of starting the detailed review, unless other necessary information outside of Milton Hydro control is required before an offer can be made.

1. The Embedded Generator must provide Milton Hydro with detailed technical information (two copies) describing the proposed Embedded Generator facility. As a minimum, this would include the following information pertaining to the connection:
  - project construction and commissioning schedule;
  - site details, including power line to be constructed, transformer location, isolating switch location and connection location relative to the Milton Hydro feeder circuit;
  - final single-line diagrams showing voltage levels, transformer connections, isolating devices, safety interlocks, fusing and metering (statistical and revenue metering);
  - nameplate data for protective relays (provide descriptive bulletins), load interrupter switch, generator(s) (include auto/manual synchronization scheme), transformers, breakers and station service;
  - generator specifications, including:
    - a) inertial constant in kWsec/kVA
    - b) maximum MVAR limit
    - c) neutral ground resistance in Ohms
    - d) short-circuit unsaturated reactance in per-unit on the generator's MVA and kV base;
    - e)  $X_d$  - Synchronous reactance in p.u.
    - f)  $X'_d$  - Direct axis transient reaction in p.u.
    - g)  $X''_d$  - Direct axis sub-transient reactance in p.u.
    - h)  $X_2$  - Negative sequence reactance in p.u.
    - i)  $X_0$  - Zero sequence reactance to p.u.

- power transformer positive and zero sequence impedances in per-unit on the transformer rating base as measured between each pair of windings:
    - a) R1
    - b) X1
    - c) R0
    - d) X0
  - large motor specifications, in order to calculate voltage drops due to motor starting:
    - a) motor type (synchronous, induction, etc.)
    - b) rating in HP or kW;
    - c) transient reactance in p.u.
    - d) sub-transient reactance in p.u.
  - relaying single-line diagram showing complete protective relaying and tripping schemes;
  - provide settings for the various protective-relaying schemes;
  - AC and DC elementary drawings for control and protection;
  - short-circuit (fault) calculations and voltage drop study (including all appropriate reactances for the generator(s) and transformer(s), relay settings, fuse selection and coordination study of the protection scheme). Short-circuit calculations will be based on IEEE Standard #ANS/IEEE C37.04
  - electrical equipment layout;
  - station ground design and ground potential rise study; and
  - phasing diagram showing all transformer connections.
2. Milton Hydro, in association with Hydro One, will review the detailed electrical package and determine the acceptability of the interface design as it affects the Milton Hydro and Hydro One systems, and provide written comments to the Embedded Generator.
  3. It is recommended that the Embedded Generator not begin procurement of electrical equipment until Milton Hydro, the Electrical Safety Authority and Hydro One have provided, in writing, the acceptability of the Embedded Generator interface design.

4. Once the Embedded Generator agrees to proceed with the construction of the generating facility, the Embedded Generator must enter into various agreements with Milton Hydro

Note: Milton Hydro will not provide any consulting services to an Embedded Generator, but only evaluate proposed generating facilities as to how it may impact on the Milton Hydro distribution system.

#### 3.5.4.4 Agreements

Before a generator installation begins operation, the Embedded Generator applicant must enter into various agreements with Milton Hydro. These agreements must clearly define the obligations and privileges of each party that need to be executed between the Embedded Generator owner and Milton Hydro. The Embedded Generator may be required to enter into all or some of the following agreements:

- **Construction Agreement:** This agreement between the Embedded Generator and Milton Hydro will detail the connection requirements and cost recovery terms.
- **Construction Agreement (Hydro One):** In the event that the Hydro One system requires modifications to connect the Embedded Generator, this agreement will describe the obligations of Milton Hydro and Hydro One to complete the connection and cost recovery terms.
- **Customer Account Contract:** In the event that the Embedded Generator is also a load customer of Milton Hydro, this contract describes the terms and applicable rates for firm power and backup power, and conditions under which backup power is granted and revoked.
- **Connection Agreement:** This is a technical document which identifies: common language and procedures to be used for normal and emergency situations; installed protection equipment; ownership and operating control of equipment; expected levels of maintenance and testing by both parties; contact names and telephone numbers' definitions; and all necessary schematic diagrams for proper communication between Milton Hydro and the Embedded Generator.
- **Operations Agreement (if required):** This agreement between Hydro One and Milton Hydro will include provisions for safe and effective operation in the presence of the Embedded Generator's equipment connected to the Milton Hydro system. This agreement may only be required if the Embedded Generator affects other parties connected to the Milton Hydro distribution system.

### 3.5.4.5 Commissioning

Prior to the Embedded Generator facility being connected to the Milton Hydro electrical distribution system, Milton Hydro Engineering staff, or their delegate, will review and witness the Embedded Generator's commissioning tests to the extent that is necessary to ensure acceptable security to the Milton Hydro and Hydro One distribution systems.

### 3.5.5 General Responsibilities

#### 3.5.5.1 Embedded Generator Responsibilities

- Design the generating facility electrical and protection package to meet the Milton Hydro, Hydro One and DSC connection requirements and Electrical Safety Authority Inspection requirements. For Electrical Inspection requirements, refer to the Electrical Safety Authority Code, Section 84, and Electrical Inspection Department Bulletin #84-1-1, or the most recent version.
- Ensure that the generating facility produces no objectionable harmonics or voltage flicker on the Milton Hydro system. If objectionable harmonics or voltage flicker do occur, the Embedded Generator will be responsible to modify the generating facility to correct the problem.
- The Milton Hydro system is operated within CSA Standard C235, entitled "Preferred Voltage Levels for AC Systems, 0 - 50,000 Volts", which recommends voltage variation limits on customer circuits. Any Embedded Generator interconnected with the Milton Hydro supply system must not cause voltages, as measured at Customer Service Entrances, to deviate more than the amounts indicated in the CSA Standard.
- The output of an Embedded Generator, when connected in parallel with the Milton Hydro supply system, must not adversely affect the voltage, frequency or wave shape of the Milton Hydro electrical distribution system.
- If a remote trip protection scheme and/or a voltage supervision scheme is utilized, Hydro One will be required to modify equipment at Hydro One-owned transformer stations and, therefore, the Embedded Generator will be responsible to cover reasonable costs incurred.
- If a remote trip protection scheme is required, the Embedded Generator must arrange for and pay the leased circuit costs on data communications circuits.
- Provide telephone communications inside the generating facility to allow for

communication with Milton Hydro staff.

- Milton Hydro may require the installation of a “Remote Terminal Unit” (RTU), which will provide data input to the Milton Hydro Supervisory Control Assisted Data Acquisition (SCADA) system. Milton Hydro will require the Embedded Generator to allow for space, in their substation, for the RTU, and provide an AC supply circuit for the unit. Milton Hydro will arrange for a data communications circuit for the SCADA unit, and pay the monthly charges for this leased circuit.
- The Embedded Generator connected to the Milton Hydro system must install its own meter in accordance with Milton Hydro metering requirements, and provide Milton Hydro with the technical details of the metering installation.
- The Embedded Generator metering must be installed at the point of supply. If it is not practical to install the meter at the point of supply, Milton Hydro will apply loss factors to the generation output in accordance with the loss factors applied for retail metering settlement.
- An Embedded Generator’s substation must include space for a metering compartment for the installation of instrument transformers and other devices for revenue metering.
- It will be the responsibility of the Embedded Generator to forward a detailed electrical package to the Electrical Safety Authority for their review of the proposed generation facility.
- Obtain all appropriate permits for the construction and operation of the generation facility (e.g., Electrical Safety Authority approvals, generator licenses, municipal construction permits, etc.)
- Advise Milton Hydro of the timetable for commissioning tests of the generator(s) in order that Milton Hydro or its delegate may review and witness the tests.

### **3.5.5.2 Milton Hydro Responsibilities**

- Identify and explain the Milton Hydro cost recovery policy to the prospective Embedded Generator.
- Review the Embedded Generator electrical design package and determine if it meets the minimum requirements to permit connection to the Milton Hydro system.
- Design and modify, as required, the Milton Hydro facilities to incorporate the Embedded Generator.
- Discuss and review with Hydro One any relay protection modifications that may

be required on the Milton Hydro supply feeder(s).

- Milton Hydro Engineering Department will be responsible to coordinate the parallel connection between the Embedded Generator and the Milton Hydro electrical distribution system.
- Milton Hydro will initiate the preparation of agreements between the Embedded Generator and Milton Hydro
- As required by the Market Rules for the Ontario Electricity Market, Milton Hydro will notify the IESO of the generation connection.

**Note:** Milton Hydro will not provide any consulting services to an Embedded Generator, but only evaluate proposed generation facilities to assess impact on the Milton Hydro distribution system.

### 3.5.6 Important Technical Requirements for Connection

The Embedded Generator's electrical and protection package shall provide the following:

- provide a three-phase, gang-operated, visible load break switch, with provision for padlocking at the point of connection to the Milton Hydro system, and which must be accessible to Milton Hydro staff. Milton Hydro will have operating control of this isolating point;
- provide a fault interrupting/synchronizing device with suitable rating for each generator;
- provide automatic tripping of the generator(s) for all faults on the Embedded Generator side of the connection point;
- provide automatic tripping of the generator(s) for phase and ground faults on the Milton Hydro electrical distribution system;
- Milton Hydro operates a three-phase four-wire system and, therefore, the appropriate transformer connection between the Embedded Generator and the Milton Hydro system can be either:
  1. High Voltage wye-grounded and a Low Voltage delta;
  2. High Voltage delta and a Low Voltage wye-grounded; or
  3. High Voltage wye-grounded and a Low Voltage wye-grounded.

The preferred transformer connection for generator units above 2 MW's is a High

Voltage wye-grounded and a Low Voltage delta.

- provide suitable transformer protection;
- install protective relays to prevent the Embedded Generator from delivering power to the Milton Hydro feeder line when that line has become isolated or islanded from the rest of the Milton Hydro system. (This will usually include over/under frequency relays and over/under voltage relays);
- for Embedded Generator load displacement projects with no power purchase by Milton Hydro, “Reverse Power Protection” will be required;
- normal reclosing time of the Milton Hydro supply station feeder breaker could be from 0.4 to 2.0 seconds. Short time delay for reclosing (i.e., <1.0 second) will increase the risk of generator damage, and may emphasize the need for a remote trip protection and voltage supervision scheme, since the Embedded Generator islanding protection may be too slow;
- remote trip may be required between the Embedded Generator and the feeder circuit breaker because the Embedded Generator is connected at a critical location on the distribution system. This feature will provide for isolation of the Embedded Generator when certain faults or system disturbances are detected at the feeder circuit breaker location;
- provide synchronizing facilities for each synchronous generator;
- provide a ground potential rise study to satisfy Milton Hydro and the Electrical Safety Authority for step/touch potential to satisfy the Communications Company for incoming voice-data circuit/personnel protection.
- the communication requirements for the Milton Hydro metering equipment and possible remote trip circuit must be confirmed with Milton Hydro before installation; and
- for induction generators, ensure that the power factor is greater than 0.9. This may require the installation of automatically disconnected capacitors. Embedded Generator’s with synchronous generators will be required to operate as near to unity power factor as possible.

**Note:** Milton Hydro continually strives to provide the most up-to-date information to our Customers. Therefore, we reserve the right to amend this guideline and its requirements at any time upon the sole discretion of Milton Hydro

### 3.6 Embedded Market Participant

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

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

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

All Embedded Market Participants are responsible for all Milton Hydro charges as approved by the Ontario Energy Board.

## 3.7 Embedded Distributor

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

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

The following terms and conditions apply to the connection of an Embedded Distributor.

### 3.7.1 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 connected 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 Milton Hydro may provide any information provided by the Customer under the terms of the Standard Embedded Distributor Agreement to Milton Hydro’s representatives, provided that Milton Hydro:

- provides such information to only those of Milton Hydro’s representatives who

need to know the information; and

- has directed such representatives to use the information in accordance with the terms hereof.

### 3.7.2 Energy Supply

As the Host Distributor, Milton Hydro reserves the right to limit the amount of energy that it agrees to supply the Customer at each embedded connection/delivery point, and this amount shall be agreed upon by both Parties.

The Customer shall notify and include Milton Hydro in any discussion, planning and interconnection design of any proposed embedded generation facility that the Customer proposes to connect to its portion of the distribution system.

### 3.7.3 Billing

Milton Hydro shall bill the Customer on a billing cycle each month for the provision of distribution services by Milton Hydro, and for all other applicable charges approved or authorized by the Ontario Energy Board, pursuant to Milton Hydro's rate orders or any codes issues by the Ontario Energy Board.

Milton Hydro 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. Milton Hydro shall adjust the Customer's usage by the applicable total loss factor for purposes of determining the Customer's non-competitive electricity costs.

If the Customer is not a Wholesale Market Participant, then Milton Hydro shall provide revenue metering for the settlement and monthly billing of the Customer. If the Customer is or becomes a Wholesale Market Participant Distributor, then the Independent Market Operator shall settle the Customer's monthly energy bill.

If the Customer is or becomes a Wholesale Market Participant Distributor, then the Corporation shall act as the default Metering Service Provider (MSP) and as such, enter into a Metering Service Provider Agreement with the Customer.

### 3.7.4 Ownership

All Milton Hydro-owned equipment, including the revenue metering equipment and instrument transformers, shall continue to be vested in Milton Hydro, unless the Parties have specified otherwise in the Embedded Distributor Agreement. (Note: presently Hydro One may own the wholesale metering installation.)

All Customer equipment and facilities shall continue to be vested in the Customer, unless

the Parties have specified otherwise in the Embedded Distributor Agreement.

### 3.7.5 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. Milton Hydro and the Customer 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.

Milton Hydro 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 Milton Hydro or the Customer, maintenance is not properly performed, the identifying Party will notify the other in writing.

### 3.7.6 Normal Operations

Control Authorities will inform each other at least seven calendar days in advance of any planned work which would have an effect on the other Parties 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 control authority is responsible for establishing the appropriate conditions for, and the co-ordination of, switching on the equipment under its control.

The control authority of the equipment under its control shall issue work protection on the equipment when work is done on that equipment. Each control authority is responsible for establishing a safe work environment, in accordance with industry standards, 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.

### 3.7.7 Communication

Communications between controlling authorities must be readily available to deal with routine and unforeseen system conditions.

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 others distribution system.
- Provide each other with information relative to feeder trips or reclosure operations caused by equipment under each Parties ownership or control.
- Following an A/ or A/R/A during regular working hours Milton Hydro's Controlling Authority will not authorize the Hydro One Controlling Authority to re-energize a feeder owned by Milton Hydro until contact has been made with the Customer's Controlling Authority.
- Following an A/ or A/R/A after regular working hours, and if no "Hold Off" is in effect, Milton Hydro has authorized the Hydro One Controlling Authority to allow one minute prior to attempting re-energization. After one attempt at re-energization, no further attempts to re-energize a feeder owned by Milton Hydro will be made until contact has been made with the Customer and Hydro One. It will be the responsibility of the Hydro One Controlling Authority to contact Milton Hydro's Controlling Authority after hours.
- When a permanent fault occurs on a feeder which supplies Milton Hydro and Customer load, the Milton Hydro Controlling Authority will notify the Customer's Controlling Authority during regular working hours, and the Customer's Line Superintendent on call for after hours permanent faults. Once communication is established and the location of the fault is not known, Milton Hydro and/or Customer staff will be dispatched to patrol their systems, and may assist each other in sectionalizing the faulted feeder.

Since Milton Hydro and the Customer each own portions of, and share, a common feeder, both Parties agree to provide each other with the following information:

- Milton Hydro shall provide the Customer with fault current information and protection settings of upstream protective devices.
- The Customer shall provide Milton Hydro with load forecasting information.
- Milton Hydro and the Customer agree to maintain phase balance within generally acceptable industry standards.
- Milton Hydro and the Customer agree to adhere to generally acceptable standards pertaining to power quality and voltage levels on the section of

feeder each Party owns.

- Milton Hydro and the Customer agree to provide each other, on request, with maintenance schedules and records on the section of feeder each party owns.

### 3.7.8 Emergency Operations

Each Party will co-operate fully in case of emergencies in order to facilitate restoration of the system back to normal, and to permit the organization of possible repairs.

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

### 3.7.9 Metering and Fault Protection

Milton Hydro agrees to deliver electricity to the Customer's distribution system through a bulk meter or interval meter for settlement purposes.

If the Customer is, or becomes, a Wholesale Market Participant Distributor registered with the Independent Market Operator, the Customer will be responsible for the wholesale metering installation(s) metering data as per the Ontario Market rules. Milton Hydro 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 Milton Hydro or the Customer provides distribution services through a load transfer.

Milton Hydro and the Customer 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 Milton Hydro and the Customer would be responsible to provide the required information to accomplish this.

### 3.7.10 Costs

Once the request for connection has been approved, and upon receipt of a Purchase Order or equivalent from the Customer, Milton Hydro shall prepare detailed engineering specifications for required system enhancements, obtain cost estimates for the specified work, and determine cost-sharing arrangements.

Milton Hydro agrees to provide the Customer, in writing, a Project Description and Letter

of Intent that includes:

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

### 3.7.11 Security Deposit

The amount of security that the Customer will have to provide Milton Hydro shall be an amount equal to 2.5 times Milton Hydro's estimate of the Customer's average monthly bill for all supply points listed in the standard agreement.

The security to be provided by the Customer shall be any one or any combination of the following types of security: irrevocable standby letter of credit or cash deposit. If the Customer provides an irrevocable standby letter of credit as security, the Customer and Milton Hydro agree that the irrevocable standby letter of credit will be automatically renewed unless the Customer provides notification in writing 90 days prior to the cancellation date.

Interest on cash Security Deposits will accrue on a monthly basis, but is credited to the Customer's account only at the time the deposit is refunded, or when applied to an outstanding account. The interest paid will be at a rate equal to the utility's bank prime rate minus 2 percent, reviewed at least annually. Should the Account Security Deposit require adjustment, it will be the responsibility of Milton Hydro to advise the Customer, and the appropriate action taken by the Party affected.

### 3.7.12 Liability

Milton Hydro shall only be liable to the Customer, and the Customer shall only be liable to Milton Hydro, for any damages which arise directly out of the willful misconduct or negligence:

- of Milton Hydro in providing distribution services to the Customer;
- of the Customer in being connected to Milton Hydro's distribution system;

or

- of Milton Hydro or the Customer in meeting their respective obligations under the Distributed System Code, their licences, and any other applicable law.

The Distributor-Customer agrees to take out liability insurance in the amount of \$5,000,000 to which the Corporation of the Town of Milton and Milton Hydro are added as additional named insured, and to provide proof of such insurance.

Despite the above, neither Milton Hydro nor the Customer 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 Customer financial contribution as per Section 3.7.3.

### 3.7.13 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 DSC 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 Distribution 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, mitigates its effects, and resume full performance under the Embedded Distributor Agreement and the DSC shall not apply to strikes, lockouts or labour disputes.

## 3.8 Unmetered Connections

This section will include all terms and conditions applicable to unmetered connections such as but not limited to the following;

### 3.8.1 Street Lighting

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

Attachment of street lighting equipment of Milton Hydro's electrical distribution system and the electrical supply to street lighting equipment is subject to approval by Milton Hydro. Street Lighting plant, facilities, or equipment owned by the Customer are subject to the Electrical Safety Authority (ESA) requirements.

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

The service to Street Lighting will be unmetered. Energy consumption will be based on connected wattage information supplied by the Customer and calculated as per hours of use, subject to the approval of Milton Hydro. It is the responsibility of the Customer to report to Milton Hydro in writing any change in consumption.

### 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 Ontario Energy Board. The service will be metered.

Each Traffic Signal and Pedestrian X-Walk/Beacon location is reviewed individually and is connected to Milton Hydro'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.

Where transformation does not exist, it will be provided and considered an expansion of the system. A capital contribution may be required.

The Ownership Demarcation point is as follows:

- For Overhead - the connection point at the secondary bushings of Milton

Hydro's transformer.

- For Underground – the connection point at the secondary bushings of Milton Hydro's transformer.

The Standard Allowance is the connections at Milton Hydro's feed pole/lines and final connections at the top of the Customer's service mast (OH) or at Customer's handwell/tapbox (UG) and is recovered via a Basic Connection Fee of \$350.00 (OH) and \$550.00 (UG) per location/installation.

All Customers must sign a contract and post a security deposit as outlined in Section 2.4.3 prior to Milton Hydro supplying electrical service.

Re-design and inspection services are at extra costs to 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 (< 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".

### 3.8.4 Decorative Lighting and Tree Lighting Services

Decorative or Tree Lighting connected to Milton Hydro's distribution System shall have a rate structure as General Service (<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**, the following outlines the Ownership Demarcation point:

- For Overhead - the top of the Customer's service standpipe/mast.
- For Underground – The line side of the Customer's main disconnect switch.

The Standard Allowance is the connections at Milton Hydro's feed pole/lines and

final connections at top of the Customer's service mast (OH) or at Customer's main switch (UG) and is recovered through a Basic connection Fee of \$350.00 (OH) and \$560.00 (UG) per location/installation.

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

## 3.9 Temporary Service

### 3.9.1 General

A temporary service is normally a metered service provided to facilitate various applications; such as, construction projects, outdoor shows, gatherings, special events, etc. Temporary services may be provided for a period less than 12 months. Temporary services may be renewed thereafter at the discretion of Milton Hydro if an extension is required and the equipment for such temporary service must be re-inspected at the end of the 12-month period. At the discretion of Milton Hydro, 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 Milton Hydro. 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 Electrical Safety Authority.

Subject to the requirements of Milton Hydro, supply will be connected after receipt of a 'Connection Authorization' from the Electrical Safety Authority, a signed contract and a security 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 Milton Hydro'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 Milton Hydro's point of supply. The Customer will pay for the temporary installation and removal prior to the commencement of any work being initiated by Milton Hydro.

Connection assets above and beyond the Standard allowance will be recovered through a Variable Connection Fee, based on actual costs.

The cost of any transformation will be charged to the Customer as part of the Variable

Connection Fee prior to energization.

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 Milton Hydro.

### 3.9.2 Metering

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

- Approved meter sockets as indicated in Section 5.3 ; and
- A lockable metal enclosure.

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

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

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

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

## 4 GLOSSARY OF TERMS

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

Sources for definitions:

**A** Electricity Act, 1998, Schedule A, Section 2, Definitions

**MR** Market Rules for the Ontario Electricity Market, Chapter 11, Definitions

**TDL** Transitional Distribution License, Part I, Definitions

**TTL** Transitional Transmission License, Part I, Definitions

**DSC** Distribution System Code Definitions

**RSC** Retail Settlement Code Definitions

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

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

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

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

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

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

**“bandwidth”** means a distributor’s defined tolerance used to flag data for further scrutiny at the stage in the VEE (validating, estimating and editing) process where a current reading is compared to a reading from an equivalent historical billing period. For example, a 30 percent bandwidth means a current reading that is either 30 percent lower or 30 percent higher than the measurement from an equivalent historical billing period will be identified by the VEE process as requiring further scrutiny and verification; (DSC)

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

**"Board"** or **"OEB"** means the Ontario Energy Board; (A, TDL, DSC)

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

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

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

**"connection"** means the process of installing and activating connection assets in order to distribute electricity to a Customer; (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 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)

**"Customer"** means a person who uses, for the person's own consumption, electricity that the person did not generate; (A, MR, TDL, DSC)

**"Controlling Authority"** means a person responsible for performing, directing, or authorizing changes in the conditions or physical position of specific apparatus or devices;

**"Customer"** means a person that has contracted for or intends to contract for connection of a building. This includes developers of residential or commercial sub-divisions;(DSC)

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

**"demand meter"** means a meter that measures a Customer'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;

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

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

**“distribution line”** means the circuits on the public right-of-way or easement from which service wires are tapped;

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

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

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

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

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

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

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

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

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

**“electric service”** means the Customer’s conductors and equipment for energy from Milton Hydro;

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

**“embedded generator” or “embedded generation facility”** means a generator whose generation facility is not directly connected to the IESO-controlled grid but instead is connected to a distribution system; (DSC)

**“embedded retail generator”** means an embedded generator that settles through a distributor’s retail settlements system and is not a wholesale market participant;(DSC)

**“embedded wholesale Customer”** means a Customer 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”** means an embedded generator that is a wholesale market participant; (DSC)

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

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

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

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

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

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

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

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

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

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

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

**"generation facility"** means a facility for generating electricity or providing ancillary services, other than ancillary services provided by a transmitter or distributor through the operation of a transmission or distribution system, and includes any structures, equipment or other things used for that purpose; (A, MR, TDL, DSC)

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

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

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

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

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

**"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; (A, TDL, DSC)

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

**Settlement** Timeframe;” (RSC, DSC)

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

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

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

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

**"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)

**"Owner"** means a person, persons, or company owning property in the Milton Hydro service area, on which work is to be performed by Milton Hydro. Confirm required – see Sec 3.1.1.

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

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

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

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

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

**"point of entry"** means the point where service wires cross from the public right-of-way or Milton Hydro easement to private property;

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

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

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

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

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

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

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

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

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

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

**“retail”**, with respect to electricity means,

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

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

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

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

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

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

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

**"service entrance"** means the point at which the service wires enter the Customer's building;

**"service wires"** means the conductors from Milton Hydro's distribution line on the public right-of-way or Milton Hydro easement to the Customer's building or service entrance;

**"Standard Supply Service Code"** means the code approved by the Board and in effect at the relevant time, which, among other things, establishes the minimum conditions that a distributor must meet in carrying out its obligations to sell electricity under section 29 of the Electricity Act; (TDL)

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

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

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

**"terminal pole"** refers to the Milton Hydro's distribution pole on which the service supply cables are terminated;

**"total losses"** means the sum of distribution losses and unaccounted for energy; (DSC)

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

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

**"Transmission System Code"** means the code, approved by the Board, that is in force at the relevant time, which regulates the financial and information obligations of the

Transmitter with respect to its relationship with Customers, as well as establishing the standards for connection of Customers to, and expansion of a transmission system; (DSC)

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

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

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

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

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

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

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

**“wholesale settlement cost”** means costs for both competitive and non-competitive electricity 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, DSC)

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

## 5 APPENDICES

5.1 Table 1 – Voltage Limits

5.2 Table 2 – Cabinet Sizes

5.3 Milton Hydro Approved Meter Bases

5.4 Milton Hydro Policy - Security Deposits

## 5.5 Connection Agreement

### 5.1 Table 1 – Voltage Limits

<b>CSA Standard CAN3-235-83 Table 3</b>				
	Recommended Voltage Limits for Circuits up to 1,000 volts, at Service Entrance			
Nominal System Voltage	<b>Extreme Operating Conditions</b>	Normal Operating Conditions		<b>Extreme Operating Conditions</b>
Single Phase				
120/240	<b>106/212</b>	110/220	125/250	<b>127/254</b>

240	<b>212</b>	220	250	<b>254</b>
480	<b>424</b>	440	500	<b>508</b>
600	<b>530</b>	550	625	<b>635</b>
Three-Phase 4-conductor				
120/208Y	<b>110/190</b>	112/194	125/216	<b>127/220</b>
240/416Y	<b>220/380</b>	224/388	250/432	<b>254/440</b>
277/480Y	<b>245/424</b>	254/440	288/500	<b>293/508</b>
347/600Y	<b>306/530</b>	318/550	360/625	<b>367/635</b>
Three-Phase 3-conductor				
240	212	220	250	254
480	424	440	500	508
600	530	550	625	635

## 5.2 Table 2 – Cabinet Sizes

<b>Service Type</b>			<b>Current Transformers are mounted in Cabinet</b>		<b>Current Transformers mounted in Metering Compartment in Switchgear</b>
Voltage	Phase	Wire	WxHxD	WxHxD	WxHxD
120/240	1	3	36"x36"x12"		
120/208	3	4	36"x36"x12"		30"x30"x10"
347/600	3	4		48"x48"x12"	30"x30"x10"
600	3	3		48"x48"x12"	30"x30"x10"

## 5.3 Milton Hydro Approved Meter Bases

### **100 Amp Overhead**

Weatherproof type 3 enclosure CSA approved for copper or aluminium.

**Conductor range:** 6-1/0 AWG aluminium - tunnel type connectors. C/W screw type ring.

**Microelectric BE1-V or equivalent.**

### **100 Amp Underground**

See - 200 amp underground 3/0 cable supply

### **200 Amp Overhead**

Weatherproof type 3 enclosure CSA approved for copper or aluminium.

**Conductor range:** 6-250 AWG aluminium - tunnel type connectors. C/W screw type ring.

**Microelectric BQ2-2V or equivalent**

### **200 Amp Underground**

**(3/0 supply)** - Weatherproof type 3 enclosure CSA approved for copper or aluminium.

**Conductor range:** 6-250 MCM AWG aluminium lay-in type connectors.

**Microelectric BS2-TVBC or equivalent**

### **200 Amp Underground**

**(250 MCM supply)** - (oversize enclosure) Weatherproof type 3 enclosure CSA approved for copper or aluminium.

**Conductor range:** Line: Double ½" studs to accommodate compression lugs

Load: 6-250 MCM AWG aluminium tunnel type connectors-(load side).

**Microelectric M02-V or equivalent**

#### **400 Amp Underground**

Self contained 400 amp rated meter socket with 3 wire current transformer built into socket to provide low current for service metering.

**Line:** Double ½" studs to accommodate compression lugs

**Load:** Connectors for parallel wiring. 6-250 MCM AWG CU/AL OR

4-500 MCM AWG CU/AL.

**Microelectric JS4A-4**

#### **Transformer Rated Meter Sockets**

20 amp, 600 volt maximum. Weatherproof type 3 enclosure. CSA approved for copper only.

**Conductor range:** 14-10 AWG. Circuit closing on left side to short out current transformer upon removal of meter. C/W screw type ring.

**Microelectric CL4-V or equivalent.**

#### **Polyphase Meter Sockets - 7 Jaw**

200 amp, 600 volt maximum. Weatherproof type 3 enclosure. CSA approved copper or aluminium.

**Conductor range:** 6-250 MCM aluminium lay-in connectors. C/W screw type ring.

**Microelectric PL27-IN or equivalent.**

#### **Three Phase Sockets - 5 Jaw**

200 amp, 600 volt maximum - Weatherproof type 3 enclosure CSA approved copper & aluminium. C/W screw type ring.

**Microelectric BQ2-VP 5<sup>th</sup> jaw- 9 o'clock position.**

## 5.4 Milton Hydro Policy - Security Deposits

**(Effective – August 1, 2004)**

Section 2.4.6.1 of the Ontario Energy Board's Distribution System Code says, "A distributor's Conditions of Service shall include the distributor's security deposit policy which shall be consistent with the provisions of this (Distribution System) Code."

Section 2.4.6.2 of the Ontario Energy Board's Distribution System Code says "Subject to this Code and a distributor's Conditions of Service, a distributor may use any risk mitigation options available under law to manage customer nonpayment risk. A distributor shall not discriminate among customers with similar risk profiles or risk related factors except where expressly permitted under this Code."

### 5.4.1 Definitions:

"Good Payment History" ("GPH") – A customer is deemed to have a Good Payment History unless, during the relevant time period, the customer has received:

More than one disconnection notice from the distributor;

More than one NSF

More than one Pre-Authorized Payment returned for insufficient funds; OR

One disconnect/collect trip has occurred.

"Competitive Electricity Costs" – represents the cost of the commodity and shall be based on the most recent estimated market prices in the real-time energy market established by the IESO.

"Non-Competitive Electricity Costs" – represents distribution charges and wholesale market charges.

"Standard Supply Service" – where customers have not chosen to sign a contract with a licensed retailer, Milton Hydro, as required by the OEB, will provide the commodity (electricity) at wholesale market prices.

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

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

#### 5.4.2 Policy:

Except as provided for in Section 5,

5.4.2.1 A residential customer is required to pay a security deposit to Milton Hydro, unless a Good Payment History of 1 year has been established.

5.4.2.2 A non residential customer in a < 50kW demand class is required to pay a security deposit to Milton Hydro, unless a Good Payment History of 5 years has been established.

5.4.2.3 A non residential customer in a > 50kW demand class is required to pay a security deposit to Milton Hydro, unless a Good Payment History of 7 years has been established.

#### 5.4.3 Form of Payment of Security Deposit:

Milton Hydro will accept as a security deposit any one of the following:

- Residential Customer
  - Cash or cheque;
  - Other forms of security at the discretion of Milton Hydro.
- Non-Residential Customer
  - Cash or cheque;
  - An automatically renewing, irrevocable letter of credit, in a form satisfactory to Milton Hydro (see Appendix A), from a bank as defined in the Bank Act, 1991, c.46.
  - Other forms of security at the discretion of Milton Hydro.
- The security deposit may be paid in equal installments over a period not to exceed four months. The first installment is due on the implementation of an implied contract or the signing of the connection agreement.

#### 5.4.4 Amount of Security Deposit:

Unless section 5 applies, the amount of the security deposit is dependent upon the customer’s billing option as outlined below and shall be adjusted accordingly if the billing option changes. The maximum amount of a security deposit required from a customer is calculated as follows:

#### 5.4.4.1 Customers on Standard Supply Service:

- Under this option, Milton Hydro will continue to issue a bill to the customer. Milton Hydro is responsible for customer non-payment risk.
- The amount of the security deposit will be based on 2.5 times estimated bill based on the customer's average monthly load during the most recent 12 consecutive months within the past 2 years for non-competitive and competitive electricity costs.
- For a low volume consumer or designated consumer, the price estimate used in calculating competitive electricity costs shall be the same as the price used by the IESO for the purpose of determining maximum net exposures and prudential support obligations for distributors, low volume and designated customers. For all other customers, the price estimate used in calculating competitive electricity costs shall be the same as the price used by the IESO for the purpose of determining maximum net exposures and prudential support obligations for market participants, other than distributors, low volume and designated customers.
- Where relevant usage information is not available for the customer for 12 consecutive months within the past 2 years, the customer's average monthly load shall be based on a reasonable estimate.
- Where a customer has a payment history which discloses more than one disconnection notice in a relevant 12 month period, the distributor may use the customer's highest actual or estimated monthly load for the most recent 12 consecutive months within the past 2 years for the purposes of calculating the maximum amount of the security deposit.

#### 5.4.4.2 Customers Contracting with a Retailer: Distributor-Consolidated Billing:

- Under this option, Milton Hydro will issue a bill to the customer. Milton Hydro is responsible for customer non-payment risk for the non-competitive and retailer charges on the customer's bill.
- Customers will be required to supply a security deposit equivalent to that required for Standard Supply Service.

#### 5.4.4.3 Customers Contracting with a Retailer: Retailer-Consolidated Billing:

- Under this option, Milton Hydro will not issue a bill to the customer. The retailer is responsible for issuing the bill to the customer and for customer non-payment risk.
- Milton Hydro will not require a security deposit from the customer.

#### 5.4.4.4 Customers Contracting with a Retailer: Split Billing:

- Under this option, Milton Hydro will bill the customer for non-competitive electricity costs and the Retailer will bill for competitive electricity costs.

#### 5.4.4.5 Administration

- Milton Hydro shall provide a customer with the specific reasons for requiring a security deposit, upon request.

#### 5.4.5 Waiver/reduction of security deposit:

A security deposit will be waived where:

- 5.4.5.1 A residential customer has established a satisfactory payment history within the last 12 months where some of the time period which makes up the good payment history has occurred in the previous 24 months;
- 5.4.5.1.1 As a customer of Milton Hydro for a period of one (1) year; OR
- 5.4.5.1.2 The customer may provide a letter from another electricity distributor or gas distributor in Canada confirming a good payment history with that distributor; OR
- 5.4.5.1.3 The customer provides a satisfactory credit check made at the customer's expense, from a company such as Equifax, TransUnion or Dun & Bradstreet.
- 5.4.5.2 A non-residential customer within a <50 kW demand rate class who provides a letter from another distributor or gas distributor in Canada confirming a Good Payment History with that distributor for 5 years where some of this time period has occurred in the previous 24 months.
- 5.4.5.3 A non-residential customer within a >50kW (other than a customer >5000kW) demand rate class, who provides a letter from another distributor or gas distributor in Canada confirming a Good Payment History with that distributor for 7 years where some of this time period has occurred in the previous 24 months, or provides a satisfactory credit check made at the customer's expense, from a company such as Equifax, TransUnion or Dun & Bradstreet.
- 5.4.5.4 A non-residential customer in any rate class other than a <50kW demand rate class who has a credit rating from a recognized credit rating agency, shall have the amount of the security deposits reduced in accordance with the following table:

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

5.4.5.5 The President/CEO of Milton Hydro Distribution Inc. may, in special circumstances, alter the amount or payment arrangements of the security deposit.

#### 5.4.6 Interest on Security Deposits:

**Rate of Interest:**

Interest shall accrue monthly on security deposits made by cash or cheque commencing on receipt of the total security deposit required by Milton Hydro. The interest rate shall be at the Prime Business Rate as published on the Bank of Canada website less 2 percent, updated quarterly.

**Payment:**

The interest accrued shall be paid out at least once every 12 months or on return or application of the security deposit or closure of the account, whichever comes first, and may be paid by crediting the account of the customer.

#### 5.4.7 Security Deposit Review:

- Milton Hydro will review every customer's security deposit at least once in a calendar year to determine whether the entire amount of the security deposit is to be returned to the customer based on the requirements under section 2 of the policy, or whether the amount of the security deposit is to be adjusted based on a recalculation of the maximum amount of the security deposit as provided under section 5 and 6.
- A customer may, no earlier than 12 months after the payment of a security deposit or the making of a prior demand for a review, demand in writing that Milton Hydro undertake a review of the deposit.
- Where it is determined in conducting a review that some or all of the security deposit is to be returned to the customer, Milton Hydro shall promptly return this amount to the customer by crediting the customer's account.
- Where it is determined in conducting a review that the maximum amount of

the security deposit is to be adjusted upward, Milton Hydro may require the customer to pay this additional amount at the same time as that customer's next regular bill comes due.

- In the case of a customer >5000 kW demand rate class, where the customer is now in a position that it would be exempt from paying a security deposit had it not already paid a security deposit, Milton Hydro is only required to return 50% of the security deposit held.

#### 5.4.8 Security Deposit Refund:

- Milton Hydro will promptly return any security deposit upon closure of the customer's account, subject to its right to use the security deposit to set off other amounts owing by the customer to Milton Hydro. The security deposit will be returned within six (6) weeks of the closure of the account.
- Milton Hydro will apply a security deposit to the final bill prior to the change in service where a customer changes from SSS to retailer-consolidated billing or a customer changes billing option from distributor-consolidated to split billing or retailer consolidated billing. Any remaining balance of the security deposit will be promptly returned to the customer.
- Milton Hydro will not pay any portion of a customer's security deposit to a retailer.
- Where a change is made from distributor-consolidated billing to split billing, Milton Hydro will retain a portion of the security deposit amount that reflects the non-payment risk associated with the new billing option.

#### 5.4.9 FAILURE TO MEET SECURITY DEPOSIT REQUIREMENTS:

Failure to meet the security deposit requirements will result in the immediate implementation of Milton Hydro's collection policy process which may lead to the discontinuation of electrical service.

#### 5.4.10 TRANSITION:

If the customer's anniversary date of providing the deposit is earlier than Milton Hydro's annual review, and the customer has maintained a good payment history, the customer may request a refund, in writing, any day after their anniversary date.

## APPENDIX A

### Irrevocable Letter of Credit

Milton Hydro requires that the following verbiage be included in all irrevocable Letter of Credit documents:

“It is a condition of this Letter of Credit that it will be automatically extended without amendment for one year periods from the expiry date hereof, or any future expiration date, unless, not less than forty-five (45) days prior to any expiry date, the administrative agent shall notify Milton Hydro Distribution Inc. by registered mail or fax, at the address specified above, that this Letter of Credit will not be extended for any such additional period.”

### 5.5 CONNECTION AGREEMENT

This Connection Agreement made this \_\_\_\_ day of \_\_\_\_\_, 200\_\_.

**BETWEEN Milton Hydro Distribution Inc.**, a Distributor licensed by the Ontario Energy Board (the “Distributor”)

**AND** \_\_\_\_\_, a Customer connected to the Distributor’s distribution system (the “Customer”)

From time to time, the Retailer and the Distributor shall be individually referred to in this Agreement as a “Party” and collectively as the “Parties.”

**WHEREAS** the Customer wishes to be connected to the Distributor’s distribution system; and

**WHEREAS** the Distributor’s Connection Agreement must conform to the Distribution System Code and a Distributor’s Conditions of Service; and

**WHEREAS** the form of this Agreement should include information included in Appendix D of the Distribution System Code, as approved by the Ontario Energy Board (the “OEB”)

**NOW THEREFORE** and in consideration of the covenants and conditions hereinafter set forth, the Parties mutually agree as follows:

The Customer agrees to abide by the Distributor’s Conditions of Service, in effect and as

amended from time to time.

The Customer further agrees to

1. Pay the Distributor for the services used by the Customer at the location covered by this Connection Agreement from the date herein until the Customer advises the Distributor that it no longer requires the service; the Distributor requires 48 hours notice of termination of contract; and
2. To commence payment in accordance with the rates approved by the Ontario Energy Board attributed to the appropriate class rating to which the service applies, on or before the due date shown on the bill and to pay all accounts monthly or as specified, thereafter.

## **General Conditions:**

### **5.5.1.1 Space and Access**

The Customer agrees to provide suitable space for the Distributor's meters, wires and where necessary poles, cables, transformers and all other appliances and equipment on the said premises and further agrees that no one who is not an agent of the Distributor shall be permitted to remove, inspect or tamper with same, including seals and that the properly authorized agents of the Distributor shall have reasonable access to the said premises for the purpose of reading, examining, preparing or removing their meters, wires, poles, cables, transformers and other appliances and equipment of the Distributor and for the inspection of all the Customer's appliances and wiring.

### **5.5.1.2 Responsibility for Equipment**

Meters, wires, poles, cables, transformers and all other appliances and equipment of the Distributor on the said premises shall be in the care and at the risk of the Customer and if destroyed or damaged by fire or any other cause whatsoever other than ordinary wear and tear, the Customer shall pay to the Distributor the value of such meters, wires, poles, cables, transformers, appliances and equipment, or the cost of repairing or replacing same.

### **5.5.1.3 Disconnection**

The Customer hereby expressly authorizes and empowers the Distributor at the Distributor's option to remove, at the Distributor's expense, the meter, wires, poles, cables, transformers and all other appliances and equipment owned by the Distributor, and discontinue the supply of electricity and terminate this agreement whenever any bills

for the said service are in arrears or upon violation by the Customer of any of the terms and conditions as set out in the Distributor's Conditions of Service. The Distributor shall provide advance notice to the Customer prior to disconnection as outlined in the Distributor's Conditions of Service.

#### **5.5.1.4 Reliability**

The Distributor agrees to use reasonable diligence in providing a regular and uninterrupted service but does not guarantee a constant service or the maintenance of unvaried frequency or voltage and will not be liable in damages to the Customer by reason of any failure in respect thereof. It is the Customer's responsibility to provide for the protection of his equipment, from voltage variations, transient operations and single phasing.

#### **5.5.1.5 Conditions of Service**

The building must be supplied with electrical energy according to the Distributor's Conditions of Supply.

#### **5.5.1.6 Binding**

This agreement shall not be binding upon the Distributor until accepted by it through a designated officer and shall not be modified or affected by any promise, agreement or representation by any agent or employee of the Distributor unless incorporated in writing into this agreement before such acceptance.

#### **5.5.1.7 Maintenance Requirements**

The Customer shall maintain the installation in efficient condition with proper devices, according to the requirements and rules of the Electrical Safety Authority (ESA). If the electrical installation is found to be inadequate, the supply of electricity shall be suspended until such time as the above requirements are complied with.

#### **5.5.1.8 Security Deposit**

The Distributor reserves the right to require security for payment of future charges in accordance with its Security Deposit Policy.

#### **5.5.1.9 Termination**

This agreement shall continue in force until terminated by notice in writing given by either party hereto thirty days in advance of termination.

**5.5.1.10 Successors**

It is agreed that the signatures of the parties hereto shall be binding upon their successors or assigns and that the vacating of the premises herein named shall not release the Customer from this agreement except at the option and by written consent of the Distributor.

**5.5.1.11 Approval of Equipment**

All electrical and mechanical equipment such as motors and welders used by the Customer shall be subject to the reasonable approval of the Distributor and the Customer shall so take and use the electrical energy as not to endanger the apparatus of the Distributor or cause any wide or abnormal fluctuations of its line voltage. Where practical, equipment with the highest power factor shall be chosen and motors should be sized to match the load. Equipment performance characteristics shall be in accordance with the Distributor’s Conditions of Service.

**5.5.1.12 Fire or Other Casualty**

In case of fire or other casualty occurs in said premises, rendering the premises wholly unfit for occupancy, the supply of electricity shall thereupon be suspended until such time, within said contract period, as the wiring shall have been repaired and approved by the ESA.

This Agreement shall ensure to the benefit of and shall be binding upon the Parties and their respective heirs, executors, administrators, successors and permitted assigns.

IN WITNESS WHEREOF this Agreement has been executed.

Date: Distributor:

.....Mary-Jo Corkum, V.P. Finance  
.....Milton Hydro Distribution Inc.

Date: Signing Officer:

Name (please print):

Title:

\_\_\_\_\_

\_\_\_\_\_

..... Mary-Jo Corkum, V.P. ]

..... Milton Hydro Distributi

\_\_\_\_\_ Signing Officer:

Name (please print):

Title:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

### 5.5.1.13 Appendix A

#### Customer Account Information

The date of your connection must be a weekday (Monday to Friday) and not a holiday.  
Backdated requests cannot be processed.

Name on Account *	
Move In Date: (dd/mm/yyyy)*	

Are you the tenant or owner of this property? (please check "X")	Tenant:	
	Owner:	

Service Address: (The property address where electricity is being provided.)

Street Number: *	Street Name: *	
Apt or Unit #:	City: *	
Postal Code: *		
Bus. Phone Number: *	Bus. Fax Number:	

Mailing Address:

Please complete this section if you would like your bills mailed to somewhere other than the service address.

Street Number:	Street Name:	
Apt or Unit #:	City:	
<b>Province:</b>	Postal Code:	

Contact Information:

Last Name:*	First Name: *	
Title:*		
E-Mail Address:		
Telephone:		

Owner Information :

If you are a tenant in this property, please complete this section to provide information about the owner and the owner's mailing address.

Owner's Name:			
Street Number:	Street Name:		
Apt or Unit #:	City: *		
Province:		Postal Code:	
Bus. Phone Number:		Bus. Fax Number:	