



**CONDITIONS**

**OF**

**SERVICE**

117 Gorrie Street  
Atikokan, On. P0T 1C0  
Phone 807-597-6600  
Fax 807-597-6988  
Emergency 24 hours 807-597-2065

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**Jan 5, 2010**

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## **ATIKOKAN HYDRO INC. CONDITIONS OF SERVICE**

### **1 Section 1 - INTRODUCTION**

#### 1.1 Identification of Distributor and Territory

In this **Conditions of Service**, “Corporation” refers to **Atikokan Hydro Inc.** The service area of Corporation will include The Township of Atikokan as at December 18, 1956.

#### 1.2 Related Codes and Governing Laws

1. Electricity Act, 1998
2. Ontario Energy Board Act, 1998
3. Distribution License
4. Affiliate Relationships Code
5. Transmission System Code
6. Distribution System Code
7. Retail Settlement Code
8. Standard Service Supply Code

#### 1.3 Interpretations

- Words referring to a gender include any gender
- Words referring to the singular include the plural and vice versa
- The term “Costumer” will be taken to mean the party contracting to purchase electrical energy
- The term “Corporation” will be taken to mean Atikokan Hydro Inc.

#### 1.4 Amendments and Changes

The provisions of this Conditions of Service and any amendments made from time to time form part of any Contract made between the Corporation and any connected Customer, Retailer, or Generator, and this Conditions of Service supercedes all previous Conditions of Service, oral or written, of **Atikokan Hydro Commission or Atikokan Hydro Inc.** at Board approval. The current version of the document is also posted on the Corporation website and can be downloaded from [www.athydro.com](http://www.athydro.com)

#### 1.5 Contact Information

**117 Gorrie St., Atikokan, Ontario P0T 1C0**

**TELEPHONE (807) 597-6600 FAX (807) 597-6988**

**EMERGENCIES 24 HRS (807) 597-2065**

**BUSINESS HOUR 8:30-4:30 MONDAY – FRIDAY**

## 1.6 Customer Rights

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

- Of the Corporation in providing distribution services to the Customer;
- Of the Customer in being connected to the Corporation's distribution system; or
- Of the Corporation or Customer in meeting their respective obligations under these conditions, their licenses and any other applicable law.

Notwithstanding the above, neither The Corporation nor the Customer shall be liable under any circumstances whatsoever for any loss of profits or revenues, business interruption losses, loss of contract or loss of goodwill, or for any indirect, consequential, incidental or special damages, including but not limited to punitive or exemplary damages, whether any of the said liability, loss or damages arise in contract, or otherwise. The Corporation shall only be liable to an Embedded Generator and an Embedded Generator shall only be liable to the Corporation for any damages that arise directly out of the willful misconduct or negligence:

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

Notwithstanding the above, neither the Corporation nor the 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 the Corporation, 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.

## 2 Section 2 - Distributor Rights

### 2.1 Access to Customer Property

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

### 2.2 Safety of Equipment

The Customer will comply with all aspects of the **Ontario Electrical Safety Code** with respect to insuring that equipment is properly identified and connected for metering and operating purposes. The Customer will take whatever steps necessary to correct any deficiencies, in particular cross wiring situations, within **72 hours** of written notice by the Corporation to the Customer. If the Customer does not take such action within this time frame, the Corporation shall disconnect the supply of power to the Customer. The policies and procedures of the Corporation with respect to the disconnection process are further described in these Conditions of Service. The Customer shall not build, plant or maintain trees, shrubs, landscaping or structures etc. that, in the sole

opinion of The Corporation, may affect the safety, reliability, or efficiency of the Corporation facilities. The Customer shall not access, use or interfere with the distribution facilities of the Corporation 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.

### 2.3 Operating Control

The Customer will provide a convenient and safe place, satisfactory to the Corporation for installing, maintaining and operating its equipment in, on, or about the Customer's premises. The Corporation assumes no risk and will not be liable for damages resulting from the presence of its equipment on the Customer's premises or approaches thereto, or action, omission or occurrence beyond its control, or negligence of any persons over whom the Corporation has no control. No person shall remove, replace, alter, repair, inspect or tamper with equipment of the Corporation except an employee or agent of the Corporation or another person lawfully entitled to do so. Customers will be required to pay the cost of repairs or replacement of the Corporation equipment that has been damaged or lost by the direct or indirect act or omission of the Customer or its agents.

### 2.4 Repairs of Defective Customer Electrical Equipment

The Customer will be required to repair or replace any equipment owned by the Customer that may, in the sole opinion of The Corporation, affect the integrity or reliability of the Corporation distribution system. If the Customer does not take such action within **72 hours** of written notice, The Corporation shall disconnect the supply of power. Policies and procedures with respect to the disconnection process are further described in **Section 2.2** of these Conditions of Service.

### 2.5 Repairs of Customer's Physical Structures

The physical location on a Customer's premises at which a Distributor's responsibility for operational control of distribution equipment ends is defined by the OEB's Distribution System Code as the "Operational Demarcation Point". Depending on the Operational 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 The Corporation and the Electrical Safety Authority. The Customer is responsible for the maintenance and safe keeping conditions of its electrical, structural and mechanical facilities located on private property.

### 2.6 Disputes

To resolve disputes, The Corporation will follow the terms of Section 23 of the Distribution License. **Section 23 of the Transitional Distribution License states:**

**The Licensee shall:**

- a) Establish proper administrative procedures for resolving complaints by Consumers and other market participants' complaints regarding services provided under the terms of this License.
- b) Publish information, which will facilitate its Customers accessing its complaints resolution process.
- c) Refer unresolved complaints and subscribe to an independent third party complaints resolution agency, which has been approved by the Board.
- d) Make a copy of the complaints resolution procedure available for inspection by members of the public at each of the Licensee's premises during normal business hours.

- e) Give or send free of charge a copy of the procedure to any person who reasonably requests it; and
- f) Keep a record of all complaints whether resolved or not including the name of the complainant, the nature of the complaint, the date resolved or referred and the result of the dispute resolution. The Corporation complaints resolution procedure is as follows:

For power outages, or issues related to power supply and delivery, contact **Atikokan Hydro Inc.** at **597- 6600**.or **Emergency 597- 2065**.

Complaints related to your electricity contract with a retailer, we suggest that you start by phoning your retailer's Customer Service Department. Keep notes of your actions, including the names of the company representatives you talk to. Follow up with a letter if you don't get satisfaction. If the problem can't be resolved, you should call the **Ontario Energy Board (OEB)** at **1-877-632-2727**.

### 3 Section 3 - DISTRIBUTION ACTIVITIES (GENERAL)

#### 3.1 Connections

#### 3.2 Building that Lies Along

1. 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 The Corporation has distribution facilities of the appropriate voltage and capacity; and:
  - a. The building can be connected to Corporation's Distribution system without an Expansion or Enhancement and;
  - b. The service installation meets the conditions listed in the Conditions of Service of the Corporation that owns and operates the distribution line.
  - c. Only one connection from the Atikokan Hydro distribution system will be made to one dwelling unit. A dwelling unit consists of a house and detached buildings.
  - d. Under special circumstances where Atikokan Hydro determines it feasible, a second service may be allowed from the Atikokan Hydro distribution system to a second building located on the Customer's property. This will be considered when the Customer owns a large piece of property and there is substantial distance between the original service and the auxiliary building that requires power. This second service will be at full cost to the Customer. Contact Atikokan Hydro to determine if this rule applies. The decision of Atikokan Hydro will be final.
2. System **connections** will incur a variable connection charge only. Capital Contribution Charges and Basic Connection charges **do not apply**. For residential Customers, the basic connection for each Customer **shall include**:
  - a. Supply and installation of overhead distribution transformation capacity or an equivalent credit for transformation equipment and;
  - b. Up to 30 meters of overhead conductor.
3. Basic Connection charge:  
All Customers (Residential, General Service, .....)\$25.00
4. Variable Connection charges are non applicable

Full estimated charge will be collected in advance of connection as a deposit. Actual charges will be invoiced (or refunded) after connection is made.

#### 3.3 Expansions / Offer to Connect

1. System **expansions** will incur a Capital Contribution Charge only. Basic Connection Charges and Variable Connection charges **will not apply**. Charges are calculated as follows:
2. The Developer has the infrastructure designed according to The Corporation Specifications. Design costs for the electrical distribution system are to be separated from those of the street lighting system.
3. The Developer submits the design to the Corporation for approval. Costs for initial and minor



revision approval are not allocated to expansion. Costs for approval of major revisions will be included in expansion costs.

4. The Developer shall tender the design to the Corporation's approved contactors. The developer shall provide tendered bids for the construction of the system expansion.
5. A deposit in the form of an Irrevocable Letter of Credit is required for 100% of the tendered construction costs. A receipt for the deposit showing details of what the deposit is intended to cover is provided to the Developer. The receipt is required by the Town of Atikokan to ensure the security is in place for a required element of the subdivision before the Town enters into a Subdivision Agreement.
6. The Developer hires a contractor to perform the installation, The Corporation inspects the work being performed.
7. Security is released as construction progresses, as per agreed to acceptance conditions in the Subdivision Agreement.
8. The Developer provides the Corporation with actual costs of infrastructure components in the break down prescribed by the Corporation Chart of Accounts.
9. The Corporation calculates the Operations, Maintenance & Amortization charges allowed by the Distribution System Code economic evaluations framework and reimburses the Developer up to the level of investment that can be committed given the calculated revenue stream.
10. Investment by the Corporation is made as new Customers are added to the system.
11. The difference between the Corporation economic evaluation deemed investment level, and the actual cost of the expansion is considered Contributed Capital and accounted for accordingly.

#### 3.4 Connection Denial

The Distribution System Code provides for the ability of the Corporation as a Distributor to deny connections. As a Distributor, the Corporation is not obligated to connect a building within its service area if the connection would result in any of the following:

- Contravention of existing laws of Canada and the Province of Ontario.
  - Violations of conditions in the Corporation License.
  - Use of a distribution system line for a purpose that it does not serve and that the Distributor does not intend to serve.
  - Adverse affect on the reliability or safety of the distribution system.
  - Public safety reasons or imposition of an unsafe work 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.
  - If the person requesting the connection owes the Corporation money.
  - If an electrical connection to the Corporation distribution system does not meet the Corporation design requirements.
- 
- Any other conditions documented in the Corporation Conditions of Service Document. If the Corporation refuses to connect a building in its service area that lies along one of its

distribution lines, The Corporation shall inform the person requesting the connection of the reasons for the denial, and where the Corporation is able to provide a remedy, make an offer to connect. If the Corporation is not capable of resolving the issue, it is the responsibility of the Customer to do so before a connection can be made.

### 3.5 Inspections Before Connections

All new, altered or enlarged electrical installations, or any installations disconnected for more than six months must be installed according to the Electrical Safety Code. The Corporation is prohibited by law from supplying power to, or energizing in any way, installations that have not been inspected and approved by the Electrical Safety Authority (ESA). All connections, disconnections and reconnections on the Corporation side of the service must be performed by employees of the Corporation and shall be arranged in advance by the Customer. If in the opinion of the Corporation, unsafe conditions exist on a Customer's property, The Corporation may apply to the Electrical Safety Authority (ESA) to inspect the conditions. All underground electrical services installed or altered on public and private property between the Corporation Main Lines and the Customer's Delivery Points are subject to inspection by the Corporation at the Customer's expense.

### 3.6 Relocation of Plant

If the Customer requests an established underground or overhead service to be relocated for any reason, the Customer will bear the full cost of relocation of the service.

### 3.7 Easements

The Customer shall grant, at no cost to the Corporation, where required, an easement to permit installation and maintenance of service. The width and extent of this easement is to be determined by the Corporation.

### 3.8 Contracts

All Customers must sign a Contract prior to connection of electrical service. In addition, General Service Customers must post a security deposit. If for some reason, a Contract has not been signed, the Customer is still bound to the terms and conditions as specified in the Contract. The Corporation requires a minimum of forty-eight hours notification for service connection. Note: The 48 hour connection notice period is only possible for energizing equipment previously installed in anticipation of the service being energized. **To ensure that the equipment installation meets with the Corporation requirements, the Customer must notify the Service Department well in advance of the 48-hour connection notice period.**

A Contract to supply electricity is non-transferable.

A Customer shall remain liable to the utility until such time the Contract is terminated.

### 3.9 Disconnection

If the supply of electricity to the Corporation is interrupted or reduced as a result of an emergency or a breakdown, repair or extension of a transmission or distribution system, the Corporation may allocate the available electricity among the consumers in its service area. The Corporation may shut off the distribution of electricity to a property if any amount payable by a person for the distribution or retail of electricity to the property is overdue. The Corporation may recover all amounts payable despite shutting off the distribution of electricity. The Corporation may disconnect without notice in accordance with a court order or for emergency, safety or system reliability reasons. The Corporation reserves the right to disconnect the supply of electricity for reasons not limited to:

- 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.

The Corporation reserves the right to disconnect the supply of electricity for reasons not limited to:

- A decrease in the efficiency of the distributor's distribution system.
- An adverse effect on the quality of distribution services received by an existing connection.
- Inability of the distributor to perform planned inspections and maintenance.
- Failure of the consumer or Customer to comply with a directive of a distributor that the distributor makes for purposes of meeting its License obligations.
- Any other conditions identified in the distributor's Conditions of Service document.

## Delivery of Electricity

### 3.10 Limitations on the Guaranty of Supply

**The Corporation agrees to use reasonable diligence to provide a regular and uninterrupted service but does not guarantee constant voltage or service and will not be liable for damages occasioned by the failure to provide such services to the Customer.**

Customers requiring a higher degree of security than that of normal supply are responsible for providing standby or backup facilities to meet their security requirements at their own cost. The Corporation may at reasonable times, enter land on which its transmission or distribution system is located:

- To inspect, maintain, repair, alter, remove, replace or disconnect wires or other facilities used to transmit or distribute electricity; or
- To install, inspect, read, calibrate, maintain, repair, alter, remove or replace a meter.

### 3.11 Power Quality

The Corporation attempts to maintain voltage variation limits, under normal operating conditions at the Customer's delivery points, as specified by the Canadian Standards Association **C235**, latest edition.

### 3.12 Conveyance of Electricity

Customers requiring a three-phase supply should install protective apparatus to avoid damage to their equipment that may be caused by power interruptions of one phase, or non-simultaneous switching of phases of the Corporation.

### 3.13 Electrical Disturbances

No electrical equipment shall be connected to the Customer's service that will produce an undesirable effect that may reflect in the Corporation circuits. Customers shall consult with the Service Department of the Corporation in the early planning stages to ensure that proposed equipment will not cause undesirable system disturbances. If, in the opinion of the Corporation, an undesirable system disturbance is being caused by existing Customer equipment, the Customer will be required to cease operation of the equipment until remedial action has been taken. If the Customer does not take such action within a reasonable time, the Corporation may disconnect the supply of power to the Customer. The Corporation at its discretion may require the installation of additional facilities to nullify any undesirable effect in the Corporation's circuits, and the additional facilities will be installed at the Customer's expense.

### 3.14 Standard Primary Voltage Offerings

SUBTRANSMISSION VOLTAGE: ..... 44kV, 3 Phase, 3-Wire

DISTRIBUTION VOLTAGE: ..... 4.16kV/2400V 3 Phase, 4-Wire  
8.32kV/4800V 3 Phase, 4-Wire

### 3.15 Standard Secondary Voltage Offerings

STANDARD SECONDARY: where the Corporation retains ownership of transformers, the secondary Voltage supplied to the Customer shall be one of the following:

- 120/240V, 1 Phase, 3-Wire or
- 120/208V, 3 Phase, 4-Wire or
- 347/600V, 3 Phase, 4-Wire

### 3.16 Voltage Guidelines

The Corporation attempts to maintain voltage variation limits, under normal operating conditions at the Customer's delivery points, as specified by the Canadian Standards Association C235, latest edition.

### 3.17 Back-up Generators

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

3.18 THE CUSTOMER:

- Shall not perform unauthorized work within 3 m (10 ft.) of the Corporation's primary main line.
- Shall obtain a service location layout from the Corporation prior to any construction to avoid delay in energizing the service.
- Shall notify the Service Department when they are ready for inspection of the service trench.
- Shall provide the Corporation access to meters in areas that are not normally available to the general public (i.e. keys when deemed necessary to the Corporation specifications).
- Shall provide a certificate of approval for connection by the Electrical Safety Authority.
- Shall provide a minimum of forty-eight hours notice required prior to energization. Shall at all times provide a safe working distance of 1220 m (48 in.) around metering equipment.
- Shall notify the Corporation of any change that would alter the existing location, ampacity or load on the service.
- Shall pay all the expense fees associated with the service in advance of any construction, the details of which may be obtained by contacting the Corporation.
- Shall provide individual metering for each separate store, shop, and apartment or industrial unit located in a shopping plaza or industrial unit.

3.19 Corporation:

- Shall energize the primary and/or connect the secondary terminations at the transformer and install a revenue meter. Under normal circumstances the Corporation will energize the service within 48 hours upon receipt of the written service connection approval. Note: The 48 hour connection notice period is only possible for energizing equipment previously installed in anticipation of the service being energized. **To ensure that the equipment installation meets with Hydro requirements, the Customer must notify the Hydro, well in advance of the 48-hour connection notice period.**
- Shall inspect the Customer's underground service trench between the Main line and the service entrance point prior to back filling of the trench. Retaining the right to refuse connecting a service.

## 4 Section 4 - Metering

### 4.1 GENERAL

All equipment used shall comply with the "Electricity and Gas Inspection Act" as stated by Industry Canada, Legal Metrology. The latest edition of rules in the "Ontario Electrical Safety Code" shall govern all installations. All installations shall be further governed by the policies and engineering standards of Hydro. All equipment used shall be rated and marked C.S.A approved to the latest standards of the Canadian Standards Association. The original equipment provider shall carry out equipment replacement, or in the case of damage, replacement by the party that caused the damage.

### 4.2 SINGLE PHASE METERING: Residential and small commercial.

- All services will be supplied at 120/240 volts, single phase 3-wire.
- All new services shall be designed to 100 amps minimum.
- All meter bases shall be for socket type meters and of the manufacturer's designation for "over sized model" as opposed to their "standard size model".
- All underground services will use a 200-amp meter base.

### THE CUSTOMER:

- Shall supply a 100-amp meter base as per Table "A" except in a 400 amp service where a 400-amp combination or C.M.S meter base is required.
- Shall supply and install the meter base, before the main disconnect, at 1.67 m +/- 150 mm (5 ft 6 in +/- 6 in) from finished grade to the center of the meter, within 1.22 m (4 ft.) from a corner of the building adjacent to the line on a pathway which is cleared of obstacles at all times (includes snow).

### 4.3 THREE PHASE METERING: Greater than 200 amp.

- Main switch to be installed ahead of the meter or metering on all three phase services except when instrument transformers are pole top mounted.
- Authorization to install a service other than stated below must be obtained from the Corporation. All new and upgraded services will be supplied with a utilization voltage of 120/208 or 347/600, 3 Phase and 4-wire where available.
- Specialty metering items or conditions (other than the Corporation's normal) will be supplied by the Customer (i.e.: Electronic Pulse Metering, Primary Metering, Interval Metering, etc.)
- All cabinets shall be 1220 x 1220 x 300mm (48 x 48 x 12 in) unless stated otherwise. Where services utilize instrument transformers mounted in the switchgear 820 x 820 x 30 mm (32 x 32 x 12 in), the cabinet shall be installed within 9 m (30 ft) of the instrument transformers. There shall be a 38 mm conduit between the instrument transformer cabinet and the meter cabinet. The meter cabinet shall be complete with a 120-volt outlet fed from a dedicated, 15 amp, Ground Fault Interrupt, circuit breaker and a dedicated "voice" quality or better telephone line. The telephone line shall be activated at the Corporation's discretion and at the Customer's expense. The Customer shall supply the back plate to the Corporation, a minimum of two weeks prior to the required installation date. The following information shall be marked in indelible ink on the back plate:
  - Top of the back plate marked "TOP" (since the backing plate mounting may not be

- square).
- Location where “**LINE**” and “**LOAD**” wires will enter and exit at opposite ends of the cabinet.
- Contact person/telephone numbers for the Company, Customer, and electrical contractor. Service voltage and amperage size. Number and size of service conductors.
- Leave 1.83 m (6 ft.) of service conductor looped in the cabinet for meter connections.
- Where more than one conductor per phase is used, the connectors shall be provided by the Customer and charged to the Customer. The Customer shall supply equipment and labour except for the meters, instrument transformers and labour for the meter connections in a meter cabinet. All existing overhead services being upgraded may remain overhead at the discretion of the Corporation.

#### 4.4 THREE PHASE METERING: 200 amp or less

Services up to 200 amps shall use a 7-jaw, socket type meter base for a self-contained meter and be of the manufacturer's “over sized model” as opposed to their “standard size model” (**refer to Table “A”**). Main switch to be installed ahead of the meter on all three phase services.

## 5 Section 5 - Energy Supply – Charges – Tariffs - Deposits

### 5.1 Service Connection

Charges for distribution services are set out in the Schedule of Electricity Rates available from the Corporation. In the event that the OEB approves rate changes, notice will be given by newspaper advertisements.

### 5.2 Customers Switching to Retailer

There are no physical service connection differences between Standard Service Supply (SSS) Customers and retailer Customers. Both Customer energy supplies are delivered through the Corporation with the same distribution requirements. Therefore, all service connections requirements applicable to SSS Customers are applicable to retailer Customers. Where a Customer proposes the development of premises that require the Corporation to place orders for equipment and before such equipment is ordered, the Customer is required to sign the necessary Supply agreement and furnish a suitable deposit. An irrevocable letter of credit or a letter of guarantee from a chartered bank, trust company or credit union is acceptable in lieu of a cash deposit.

### 5.3 Standard Supply Service

All existing the Corporation Customers are automatically Standard Service Supply (SSS) Customers until such time that the Corporation is informed of their switch to an electricity retailer. The Customer or Customer's authorized retailer must make the Service Transfer Request. (STR).

### 5.4 Retailer Supply

Standard Supply Service Customer's switching to a retailer shall comply with the Service Transfer Request (STR) requirements as outlined in sections 10.5 to 10.5.6 of the Retail Settlement Code. All requests shall be submitted through the retailers Hub provider as Electronic Business Transactions (EBT). Service Transaction Requests (STR) shall contain the information as set out in Section 10.3 of the Retail Settlement Code. If the information is incomplete, the Corporation will reject the Service Transaction Request (STR) with appropriate information on the nature of the rejection.

### 5.5 Wheeling of Energy

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

### 5.6 Security Deposits

Except for Customers who meet the deposit waiver conditions described below, all Customers are required to pay a security deposit or provide a guarantee to the Corporation for all amounts owing. A billing cycle factor  $x$ , will be used on an estimated bill based on the customer's average monthly load with the distributor during the most recent 12 consecutive months within the past two years. Security deposits must be in the form of:

- Cash or cheque.
- An Irrevocable Letter of Credit or a letter of guarantee from a chartered bank, trust company or credit union.



**Security Deposit amount required detailed below:**

**5.7 Residential Service**

For the purposes of sections 5.6, the billing cycle factor is 2.5 if the customer is billed monthly, 1.75 if the customer is billed bi-monthly and 1.5 if the customer is billed quarterly

Security deposits or guarantees may be waived for residential Customers if the following condition is met:

- The Customer has provided the Corporation with evidence of a good payment record during the past 12 months with the Corporation or another LDC in the form of a Letter of Reference from that LDC.
- The customer has maintained an account paid in full on or prior to the due date for twelve (12) months, with no NSF's OR
- The customer does not owe any arrears on any other the Corporation account past or present
- Deposits obtained from Residential Customers will be refunded upon final billing or after subsequent review. The Security Deposit, plus applicable interest shall be credited to the residential service account if a satisfactory payment record is maintained over 12 consecutive months. Upon final billing of an account, cash deposits will be applied to the final bill, and any remainder will be refunded with applicable interest to the Customer.
- 

**5.8 General Service**

- A \$200 minimum up to the equivalent of 2.5 months average projected billing.
- A new business with no history moving into a vacant location will require a deposit equal to two and a half [2.5] months previous load history at that location (minimum of \$200.00) to be assessed after six (6) months.
- A new business at a new location (no previous occupant) will require a \$200.00 minimum deposit unless a reasonable consumption can be estimated; to be reassessed after 6 months of service .
- An existing business (load) will maintain a 2.5 month deposit equal to 2.5 times the average billing over the past 12 month.
- An existing business moving to a new location will transfer their load for deposit calculation purposes.
- Unmetered loads (flat rates, etc.) can be grouped together as one deposit if one customer. Minimum deposit of \$200.00
- If the Customer has no payment history with the Corporation, the above rules will apply to determine the amount of the security deposit based on electricity consumption for similar residential or commercial Customers.

Security deposits shall not be applied to an outstanding account, in whole or part, and shall only be applied to amounts owing on the Corporation account when the account is finalized.

The interest rate on cash deposits shall be determined by the Corporation will be applied to the service account annually.

Non-cash security (Irrevocable Letter of Credit) will be applied after the final bill due date, if full payment has not been received from the Customer.

Security deposits or guarantees will **not** be waived for Commercial Customers and will be held until the account is finalized.

## 5.9 Billing

The Corporation may, at its option, render bills to its Customers on either a monthly, or bimonthly schedule.

Bills for the use of electrical energy may be based on either a metered rate or a flat rate, as determined by the Corporation. The Corporation will bill Standard Supply Service Customers.

Standard Supply Customers may dispute the charges shown on their bill by contacting and advising the Corporation

Retailer Customers may be billed by the Corporation depending on the billing options selected by the retailer in accordance with the Retail Settlement Code. Retailer Customers may dispute the charges shown on their bill by contacting and advising the Customer Care Department of the Customer's Retailer.

## 5.10 Payments and Overdue Account Interest Charges

Bills are forwarded for energy services provided to the Customer. Bills are payable in full by the due date, otherwise a late payment charge will apply. Where the Customer on or before the due date has made a partial payment, the late payment charge will apply only to the amount of the bill outstanding at the due date. In the event of partial payment by a Customer, payments will 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 disconnected. Service will be restored once satisfactory payment has been made. Disconnection of service does not relieve the Customer of the liability for arrears. The Corporation shall not be liable for any damage on the Customer's premises resulting from such disconnect of service. A reconnection charge will apply where the service has been disconnected due to non-payment. The Customer will be required to pay additional charges for the processing of non-sufficient fund (N.S.F.) cheques. Customers will pay special charges and deposits, on request, which may arise from a variety of conditions such as:

### 5.11 Security Deposit:

As a guarantee of payment of energy bills some Customers will require a deposit to the Corporation.

### 5.12 Connection Fee:

A Connection Fee will apply to all accounts taken over by a new Customer.

### 5.13 Collection Charge:

Whenever a Corporation employee visits a Customer's premises to leave notice of nonpayment or to collect payment for an account, there will be a charge.

#### 5.14 Customer Information

Account information will be provided to a third party who is not a retailer only with the written authorization of the Customer. The Corporation may provide information for operational purposes, aggregated sufficiently such that an individual's Consumer information cannot reasonably be identified, at no cost to another distributor, a transmitter, the IMO or the OEB. The Corporation may charge an OEB approved fee for all other requests for aggregated information. At the request of a Consumer, the Corporation will provide a list of retailers who have Service Agreements in effect within its distribution service area. The list will inform the Consumer that an alternative retailer does not have to be chosen in order to ensure that the Consumer receives electricity and the terms of service that are available under Standard Supply Service. Upon receiving an inquiry from a Consumer connected to its distribution system, the Corporation will either respond to the inquiry if it deals with its own distribution services or provide the Consumer with contact information for the entity responsible for the item of inquiry, in accordance with Chapter 7 of the Retail Settlement Code.

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

## 6 Section 6 – CUSTOMER CLASS SPECIFIC

### 6.1 Residential Customers

This section refers to the supply of electrical power to all detached, semi-detached and duplex dwelling units. The Customer will be required to obtain an approved service layout from the Service Department before proceeding with the relocation or installation of any service. Failure to do so may result in the service having to be relocated at the Customer's expense. Approved service locations or layouts are final. Any deviation without prior consultation with the Service Department may be subject to correction at the expense of the Customer. No layout approvals will be done on Secondary services that are not directly attached to the Corporation's street circuits. **Electrical Safety Authority inspection is required for all work.** The Customer will be supplied at one service entrance only. Where single-phase power is required, it will be supplied as a 3-wire service having a nominal voltage of 120/240V. The maximum transformation on any single-phase service is 100kVA and the maximum allowable service is 400A.

No work will proceed or materials ordered until appropriate construction charges, deposits, documentations or contracts have been received. **The Electrical Safety Authority (ESA) will govern any electrical service requirement not mentioned in this section on Residential Services.**

### 6.2 OVERHEAD SERVICES FOR RESIDENTIAL CUSTOMERS:

All overhead services will have a minimum rating of 100A up to and including the meter base. The Customer shall provide entrance equipment including provisions for the attachment of the supply conductors. The Ontario Electrical Safety Code will govern rules and regulations concerning masts. Services located further than 30m (100ft.) from the Corporation's overhead street circuit may require the Customer to construct a secondary pole line. This secondary pole line will be at the Customer's expense and subject to inspection by the Electrical Safety Authority (ESA).

### 6.3 Overhead Primary

Where the Corporation deems an overhead primary pole line to be practical, the Customer shall install and maintain such a pole line in accordance to the Electrical Safety Code. This primary pole line shall be guyed at opposite ends in such a manner to be considered self-supporting. The first service pole or first point of support shall be double dead-end construction, according to the Corporation specifications and shall not be more than 30 m (100 ft.) from the main supply street circuit. To avoid conflict with guying, the neutral shall be continuous and tied in on a spool bolt or clevis. The Customer shall leave sufficient wire coiled at the first point of support to reach the main supply street circuit with excess to accommodate proper dead-ending. Any wire too short will be replaced at the Customer's expense. All primary pole lines will be insulated for 27.6 kV unless 44kV is required. All three phase primary services are to be 4-wire. Pole class and sizes are as follows:

- Single phase transformer pole, 12.2m (40 ft) Class 4
- Single or three phase pole line, 12.2m (40 ft) Class 4
- Three phase transformer pole, 13.7m (45 ft) Class 4

#### 6.4 Demarcation Point.

On services within 30 m (100 ft) of the main road circuit that do not require a secondary pole line, the Corporation will be responsible up to and including the secondary connections at the mast. Any secondary services over 30 m (100 ft) where the Customer is required to provide a secondary pole line, the point of demarcation will be the connections to the overhead secondary street circuit.

#### 6.5 Minimum Requirements

In addition to the requirements of the Ontario Electrical Safety Code (latest edition), the following conditions shall apply: A clevis type insulator is to be supplied and installed by the Customer. This point of attachment device must be located:

- Not less than 4.5 m (15 ft) nor greater than 5.5 m (18 ft) above grade (to facilitate proper ladder handling techniques).
- Between 150 mm and 300 mm (6-12 in) below the service head.

A large, 4-jaw meter socket of an approved manufacturer shall be provided. Certain areas will require a 5-jaw socket as determined by the Corporation.

#### 6.6 Services over Swimming Pools

Although the Ontario Electrical Safety Code allows electrical conductors to be located at adequate height, the Corporation 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 Customer's expense, any electrical conductors located directly over the proposed pool location. Where overhead service conductors are in place over an existing swimming pool, the Corporation will provide up to 30 m (98.4 ft) of overhead service conductors, at no charge, to allow rerouting of the service. The property owner will pay any other costs. All new services from the Corporation's main line will be installed according to the Corporation specifications at the cost of the Customer, less the Standard Allowance for an overhead service. Any exceptions of the above will be at the discretion of the Corporation

#### 6.7 UNDERGROUND SERVICES FOR RESIDENTIAL CUSTOMERS

All underground service wires whether supplied from the Corporation's Main Line or from a private pole line, will be installed and supplied by the Customer at their expense. The dip pole must be bucket truck accessible. The trench route must be approved by Hydro and the Customer is to follow the route indicated on the underground drawing supplied by the Corporation. Any deviation from this route must be pre-approved. The Customer will be responsible for all costs associated with the design and inspection, and all additional redesign and subsequent re-inspection costs due to changes or deviations initiated by the Customer or its agents. Where the Corporation's main line is on the opposite side of the road allowance, the Customer shall be responsible for the cost of the road crossing.

The Customer will assure the provisions for the service entrance and meter meets the approval of the Corporation. It is the responsibility of the Customer or their contractor to obtain clearances from all of the utility companies (including the Corporation) before digging. It is the responsibility of the Customer to contact the Corporation to inspect each trench prior to the installation of service cables. The Customer shall ensure that any intended tree planting has appropriate clearance from the underground electrical plant.

### 6.8 Underground Secondary

All underground secondary services will be a minimum rating of 200 Amp, up to and including the meter base. The Customer shall install secondary conductors in a 100 mm (4 in) PVC Type II duct from the main line to the delivery point according to the Corporation specifications. The Customer will supply all adapters, sceptor pipe, weather heads and clips required to take the secondary wires up the pole to the connection point at the main line. Meter base terminations will be supplied and installed by the Customer. The Corporation will maintain the service after energization.

### 6.9 Underground primary

The Customer shall supply, install and maintain the following according to the Corporation specifications:

- The transformer base complete with grounding.
- Suitable access for the Corporation vehicles to the metering equipment and transformer. Where necessary this should include a suitable unobstructed paved or graveled surface.
- Concrete encased duct bank from the transformer base to the main supply point.
- Cable, #1/0 AWG, compact Cu., (or #2/0 Al.) TR-XLPEI, 100% CN, PVCJ, 28kV

### 6.10 Demarcation Point

The demarcation point for all secondary underground residential services supplied from the Corporation's main line will be up to, and including the line side connection of the meter base. Underground services which are installed or inherited by the Corporation shall be maintained by the Corporation. Site restoration by the Corporation will be confined to the immediate area of the repair work and will include only the replacement of similar surface materials within the immediate area. Sheds, patios and any type of building in the immediate area where repair work is required will be disassembled or moved by the Customer at their expense.

If the Customer damages secondary conductors owned by the Corporation, the Customer will be responsible for all costs involved to execute repairs. Where an existing service requires what is considered more than one normal repair, the Corporation may require the Customer to replace the service at their expense. The trench for all underground services is to be no less than 1 m (3 ft) and no more than 1.3 m (4 ft.) in depth. Due to secondary line loses; the maximum allowable length of secondary service (including pole riser distance) will be 75 m (250 ft) for 4/0 aluminum. For longer distances, contact the Service Department. If the secondary cables are supplied from a private pole line, the termination shall be done by the Customer at their own expense. If the secondary cables are supplied from the Corporation's Main line, the termination at the supply point shall be done by the Corporation at the expense of the Customer. The Customer will supply, install and maintain a rigidly mounted 50 mm (2 in) minimum diameter. I.P.S., C.S.A approved service entrance conduit, termination 600 mm (2 ft) below grade complete with conduit bushing. The Customer is also responsible for all meter base connections.

#### 6.11 General Service (less than 50kW)

The Customer shall supply the following to the Corporation well in advance of installation commencement:

- 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 site plan indicating the proposed location of the service entrance equipment
- with respect to public rights-of-way and lot lines.

The Customer shall construct or install all civil infrastructures (including but not limited to poles, UG conduits, transformer pad) on private property. All civil infrastructures are to be in accordance with The Corporation current standards, practices, specifications and this Conditions of Service and are subject to the Corporation inspection and acceptance. It is the responsibility of the Customer or his/her contractor to obtain clearances **from all of the utility companies (including the Corporation) before digging.**

In addition the Corporation 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 the Corporation construction activities. If a Customer requests special construction beyond the normal the Corporation standard installation specifications, the Customer shall pay the additional cost, including engineering and administration fees. The Customer's 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 the Corporation employees and agents at all hours to permit meter reading and to maintain electric supply. This room must be locked. The Customer shall install a pad bolt with mortise. The Corporation Inc shall provide a secure arrangement so that the Corporation padlock can be installed as well as the Customer's lock. The electrical room shall not be used for storage or contain equipment foreign to the electrical installation within the area designated as safe working space. All stairways leading to electrical rooms above or below grade shall have a handrail on at least one side as per the Ontario Building Code and shall be located indoors. The electrical room shall have a minimum ceiling height of 2.2 m (7.2 ft) 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 Customer will be supplied via one service entrance and one service voltage only. The allowable utilization voltages are:

- 120/240 volt, 1 phase, 3-wire
- 120/208 volt, 3 phase, 4-wire
- 347/600 volt, 3 phase, 4-wire
- 600 volt, 3 phase, 3-wire – only if 347/600 not available

All new services from the Corporation main line will be installed below ground according to the Corporation specifications, at the cost of the Customer. Any exceptions of the above will be at the discretion of the Corporation. The maximum transformation supplied by the Corporation is as follows:

### Primary voltage # of Phases Transformation

2400 1 phase 100 kVA Where available  
 2400/4160 3 phase 300 kVA Where available  
 4800 1 phase 100 kVA If 2400 not available  
 4800/8320 3 phase 300 kVA If 2400 not available

#### 6.12 Underground Service Requirements

The Customer shall construct or install all civil infrastructure (including but not limited to poles, UG conduits, transformer pad) on private property that is deemed required by the Corporation. All civil infrastructures are to be in accordance with the Corporation current standards, practices, specifications and this Conditions of Service and are subject to the Corporation inspection and acceptance. The Customer is responsible to maintain all its structural and mechanical facilities on private property in a safe condition satisfactory to the Corporation. Each trench route must be approved by the Corporation. Any deviation from this route must also be approved by the Corporation. The Customer will be responsible for the Corporation 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 Customer or his/her contractor to obtain clearances from all of the utility companies (including the Corporation) before digging. It is the responsibility of the Customer to contact The Corporation to inspect each trench prior to the installation of cables. If the distance from the Corporation's main line to the service entrance is more than 75m (246 ft) the Corporation may require the service be designed and installed for distribution voltage. If the Customer requests an established underground or overhead service to be relocated due to construction of a building or other reasons, the Customer will bear the full cost of relocation of the service.

#### 6.13 Underground Secondary

The Customer shall install secondary conductors in a 100 mm (4 in) PVC Type II duct from the main line to the delivery point according to the Corporation specifications. The Customer will supply all adapters, sceptor pipe, weather-heads and clips required to take the secondary wires up the pole to the connection point at the main line.

#### 6.14 Underground Primary

The Customer shall supply, install and maintain the following according to the Corporation specifications:

- The transformer base complete with grounding.
- Suitable access for the Corporation vehicles to the metering equipment and transformer. Where necessary this should include a suitable unobstructed paved or graveled surface.
- Concrete encased duct bank from the vault to the main supply point.
- Cable #1/0 AWG, compact Cu., (or 2/0 Al,) TR-XLPEI, 100% CN, PVCJ, 28kV..

#### 6.15 General Service (less than 50kW)

Where the Corporation deems an overhead primary supply to be practical; the Customer shall install and maintain such a pole line in accordance to the Electrical Safety Code. This primary pole line shall be guyed at opposite ends in such a manner to be considered self-supporting. The first service pole or first point of support shall be double dead-end construction according to the Corporation specifications and shall not be more than 30 m (98.5 ft ) from the main supply street



circuit. To avoid conflict with guying, the neutral shall be continuous and tied in on a spool bolt or clevis. The Customer shall leave sufficient wire coiled at the first point of support to reach the main supply street circuit with excess to accommodate proper dead-ending. Any wire too short will be replaced at the Customer's expense. All primary pole lines will be insulated for 27.6 kV unless 44kV is required. All three phase primary services are to be 4-wire.

Pole class and sizes are as follows:

- Single phase transformer pole, 12.2 m (40 ft) Class 4
- Three phase transformer pole, 13.7 m (45 ft) Class 4
- Single or three phase pole line, 12.2m (40 ft) Class 4

#### 6.16 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. Prior to any temporary service being installed, the Customer must contact the Service Department to arrange for a layout of the installation. The Customer will be responsible for all associated costs for the installation and removal of equipment required for a temporary service to the Corporation point of supply. Temporary services may be provided for a period of no more than 12 months. Temporary services must be renewed thereafter if an extension is required and the equipment for such temporary service must be re-inspected at the end of the 12-month period. Subject to the requirements of the Corporation, supply will be connected after receipt of a 'Connection Authorization' from the Electrical Safety Authority, a signed contract and payment of any associated costs.

#### 6.17 General Service (Above 50 kW)

All non-residential Customers with an average peak demand greater than 50 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 90% of the proposed capacity or installed transformer. The Customer shall supply the following to Corporation well in advance of installation commencement:

- 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 that demand a high consumption of electrical energy
- Survey plan and site plan indicating the proposed location of the service entrance equipment with respect to public rights-of-way and lot lines.
- For General Service Class Customers (above 50 kW demand), electrical, architectural and/or mechanical drawings are required by The Corporation

The Customer shall construct or install all civil infrastructure (including but not limited to poles, UG conduits, transformer pad) on private property. All civil infrastructures are to be in accordance with The Corporation current standards, practices, specifications and this Conditions of Service and are subject to the Corporation's inspection and acceptance. It is the responsibility of the Customer or his/her contractor to obtain clearances **from all of the utility companies (including the Corporation) before digging**. The Corporation will undertake the necessary programs to maintain and enhance its distribution plant at its expense. In the event that services or facilities to a Customer need to be restored as a result of these construction or maintenance activities by the Corporation, they will be restored to an equivalent condition. In addition the Corporation 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 the Corporation construction activities. If a Customer requests special construction beyond the normal The Corporation standard installation in accordance with the program, the Customer shall pay the additional cost, including engineering and administration fees. 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 the Corporation employees and agents at all hours to permit meter reading and to maintain electric supply. This room must be locked. The Customer shall install a pad bolt with mortise. The Corporation shall provide a secure arrangement so that the Corporation padlock can be installed as well as the Customer's lock. The electrical room shall not be used for storage or contain equipment foreign to the electrical installation within the area designated as safe working space. All stairways leading to electrical rooms above or below grade shall have a handrail on at least one side as per the Ontario Building Code and shall be located indoors. The electrical room shall have a minimum ceiling height of 2.2 m (7.2 ft) 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.

#### 6.18 General Service (Above 50kW)

The Customer will be supplied via one service entrance and one service voltage only. The allowable utilization voltages are:

- 120/240 volt, 1 phase, 3-wire
- 120/208 volt, 3 phase, 4-wire
- 347/600 volt, 3 phase, 4-wire
- 600 volt, 3 phase, 3-wire – only if 347/600 not available

All new services from the Corporation main line will be installed below ground according to the Corporation specifications, at the cost of the Customer. Any exceptions of the above will be at the discretion of The Corporation. The maximum transformation supplied by the Corporation is as follows:

Primary voltage # of Phases Transformation

- 2400 1 phase 100 kVA
- 2400/4160 3 phase 300 kVA
- 4800 1 phase 100 kVA
- 4800/8320 3 phase 300 kVA
- 44,000 3 phase 2 MVA

#### 6.19 Underground Service Requirements

The Customer shall construct or install all civil infrastructure (including but not limited to poles, UG conduits, transformer pad) on private property, that is deemed required by the Corporation, all civil infrastructures are to be in accordance with the Corporation current standards, practices, specifications and this Conditions of Service and are subject to the Corporation inspection/acceptance. The Customer is responsible to maintain all its structural and mechanical facilities on private property in a safe condition satisfactory to the Corporation. The trench route and any deviation from this trench route must also be approved by the Corporation. The Customer will be responsible for the Corporation 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 Customer 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 Customer to contact the Corporation to inspect each trench prior to the installation of cables. If the distance from the Corporation main line to the service entrance is more than 55 m (180 ft), the Corporation may require that the service be designed and installed for distribution voltage. If the Customer requests an established underground or overhead service to be relocated due to construction of a building or other reason, the Customer

will bear the full cost of relocation of the service. The Customer will be supplied via one service entrance and one service voltage only.

#### 6.20 Underground Secondary

The Customer shall install secondary conductors in a 100 mm (4 in) PVC Type II duct from the main line to the delivery point according to The Corporation Inc specifications. The Customer will supply all adapters, sceptor pipe, weather heads and clips required to take the secondary wires up the pole to the connection point at the main line.

#### 6.21 Underground Primary

The Customer shall supply, install and maintain the following according to The Corporation Inc specifications:

- The transformer pad and vault complete with grounding.
- Suitable access for the Corporation vehicles to the metering equipment and transformer. Where necessary this should include a suitable unobstructed paved or graveled surface.
- Concrete encased duct bank from the transformer base to the main supply point.

#### 6.22 Overhead Primary

Where the Corporation deems an overhead primary supply to be practical; the Customer shall install and maintain such a pole line in accordance to the Electrical Safety Code. This primary pole line shall be guyed at opposite ends in such a manner to be considered self-supporting. The first service pole or first point of support shall be double dead-end construction, according to the Corporation specifications and shall not be more than 30 m (98.5 ft) from the main supply street circuit. To avoid conflict with guying, the neutral shall be continuous and tied in on a spool bolt or clevis. The Customer shall leave sufficient wire coiled at the first point of support to reach the main supply street circuit with excess to accommodate proper dead-ending. Any wire too short will be replaced at the Customer's expense. All primary pole lines will be insulated for 27.6 kV unless 44kV is required. All primary services are to be 4-wire.

Pole class and sizes are as follows:

- Single-phase transformer pole 12.2 m (40 ft) Class 4
- Three-phase transformer pole 13.7 m (45 ft) Class 4
- Single or three-phase pole line 12.2 m (40 ft) Class 4

#### 6.23 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. Prior to any temporary service being installed, the Customer must contact the Service Department to arrange for a layout of the installation. The Customer will be responsible for all associated costs for the installation and removal of equipment required for a temporary service to the Corporation point of supply. Temporary services may be provided for a period of no more than 12 months. Temporary services must be renewed thereafter if an extension is required and the equipment for such temporary service must be re- inspected at the end of the 12 month period.

Subject to the requirements of the Corporation, supply will be connected after receipt of a 'Connection Authorization' from the Electrical Safety Authority, a signed contract and payment of any associated costs.

#### 6.24 Private Substations

Customers will be required to supply and install their own transformation and associated hardware when the following conditions exist:

- The Customer requires over 300 kVA of transformation from the 4160 volt or 8320 volt system, or
- The Customer requires over 2 MVA of transformation from the 44,000-volt system.

Transformer and substation location are subject to the Corporation approval as well as the Electrical Safety Authority inspection. Customer must ensure compliance with all requirements for Site Plan Approval by the Township of Atikokan. The Corporation will make final connections at the termination pole at the expense of the Customer. Depending on the area and the location of the feed to a private substation, the Customer may be required to install at their expense an underground feed as per The Corporation specifications. It is the Customer's responsibility to contact the Corporation Service Department prior to the commencement of any work on a private substation to schedule any approvals, costs, specifications and requirements.

#### 6.25 Technical Information

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

#### 6.26 Site & Grading Plans

All site and grading plans shall 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.

#### 6.27 Mechanical Servicing Plan

Mechanical Servicing Plans shall show the location of all services proposed or existing such as water, gas, storm and sanitary sewers, telephone, et cetera.

#### 6.28 Floor Plan

Floor Plans shall show the service location, other services location, driveway, parking and indicate the total gross floor area of the building.

#### 6.29 Duct Bank Location

The Customer shall show the preferred routing of the underground duct bank on the property. This is subject to approval by the Corporation

#### 6.30 Transformer Location

The Customer shall indicate the preferred location on the property for the high voltage transformation. This is subject to approval by the Corporation. Transformation will be pad mounted depending on the project load requirements. Indicate preferred location in the building of the meter room and the main switchboard.

### 6.31 Single Line Diagram

The Customer shall 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 the Corporation and Customer owned equipment.

### 6.32 Substation Information

Where a Customer owned substation is to be provided, the Customer 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, 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

### 6.33 General Service (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 90% of the installed transformer.

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 the Corporation's requirements for high voltage installations. The Corporation 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. Customer owned substations must be inspected by both the Electrical Safety Authority and the Corporation. The Customer will provide a pre-service inspection report to the Corporation. A contractor acceptable to the Corporation will prepare the certified report to the Corporation.

### 6.34 Embedded Generation

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 the Corporation, or the security, reliability, efficiency and the quality of electrical supply to other Customers connected to the Corporation's distribution system. If damage or increased operating costs result from a connection with a generator, the Customer responsible shall reimburse the Corporation for these costs. When an embedded generator is connected to the Corporation's distribution system, the Customer shall provide an interface protection that minimizes the severity and extent of disturbances to that distribution system and the impact on other Customers. The interface protection shall be capable of automatically isolating the generator(s) from the Corporation's distribution system for the following situations:

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

Customer shall disconnect the embedded Generator from the Corporation' 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 the Corporation and the Customer.

#### 6.35 Embedded Market Participant

Under the "Market Rules for the Ontario Electricity Market", Chapter 2, section 1.2.1, "No persons shall participate in the IMO-administered markets or cause or permit electricity to be conveyed into, through or out of IMO-controlled grid unless that person has been authorized by the IMO to do so". All Embedded Market Participants, within the service jurisdiction of the Corporation, once approved by the IMO are required to inform the Corporation of their approved status in writing, at least 30 days prior to their participation in the Ontario Electricity market.

#### 6.36 Embedded Distributor

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

#### 6.37 Unmetered Connections

#### 6.38 Street Lighting

All services supplied to street lighting equipment owned by or operated for the Township of Atikokan shall be classified as Street Lighting Service. For rate structure details refer to the Corporation Schedule of Rates. Street Lighting plant, facilities, or equipment owned by the Customer are subject to the Electrical Safety Authority (ESA) requirements and the Corporation specifications.

#### 6.39 Decorative Lighting and Tree Lighting Services

1. Decorative or Tree Lighting if connected to the municipal will be treated as a Street Lighting Class of service.
2. Decorative or Tree Lighting connected to the Corporation distribution System shall have a rate structure as General Service (<50 kW) Class Customers. Refer to the Schedule of Rates.
3. If the service is metered, the following outlines the Operational Demarcation point:
  - For Overhead - the top of the Customer's service standpipe/mast.
  - For Underground – The line side of the Customer's meter base

## 7 Section 7 – GLOSSARY OF TERMS

**“CUSTOMER”** means a person, corporation or representative of the Customer from whom the Corporation has accepted a contract.

**“DELIVERY POINT”** means the point at which circuits cross over from the public Right-Of-Way, or The Corporation’s easements to private property;

**“GENERAL SERVICE CUSTOMER”** means a Customer who operates a commercial or industrial business;

**“THE CORPORATION”** means Atikokan Hydro Inc., or their authorized Representative;

**“MAIN LINE”** means the Corporation Main Circuits on public Right-of-Way or easements from which service wires are tapped;

**“OPERATIONAL DEMARCATION POINT”** means the physical location on a Customer’s premises at which a Distributor’s responsibility for operational control of a Distribution System ends;

**“RESIDENTIAL CUSTOMER”** means a Customer whose electricity requirements are for normal domestic or household purposes;

**“SERVICE ENTRANCE”** means the point and equipment at which the service wires enter the Customer’s premises;

**“SERVICE LOCATION”** means the location where the service wires enter private property. Location shall be approved by the Service Department, before construction:

**“SERVICE WIRES”** mean the conductors from the Corporation’s Main circuits on public streets or the Corporation’s easements to the Customer’s premises

**“EMBEDDED GENERATOR”** or **“EMBEDDED GENERATION FACILITY”** means a generator whose generation facility is not directly connected to the IMO-controlled grid but instead is connected to a distribution system (DSC);

**“RETAILER”** means a person who retails electricity;

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

**“ONTARIO ENERGY BOARD ACT”** means the Ontario Energy Board Act, 1998, S.O. 1998, C.15, Schedule B;

**DISTRIBUTION SERVICES”** means services related to the distribution of electricity and the services the OEB has required distributors to carry out, for which a charge or rate has been approved by the OEB under section 78 of the Ontario Energy Board Act.



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

**“DISTRIBUTION SYSTEM CODE”** means the code, approved by the OEB, 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

**“DISTRIBUTOR”** means a person who owns or operates a distribution system

**“TRANSMITTER”** means a person who owns or operates a transmission system

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

## 8 Section 6 - APPENDICES

8.1 TABLE  
'A'

### 8.2 METERING REQUIRED

TYPE				
Supply Voltage	Main Switch Amperes	Description	Maximum kVA allowed	
120/240	100	1-phase 3-wire	19	Manufacturer's "Oversized" Socket type meter base with 4-Jaws
120/240	100	1-phase 3-wire	38	Manufacturer's "Oversized" Combination Socket type meter
120/240	100	1-phase 3-wire	77	base with 5-Jaws
120208	200	3-phase 4-wire	58	Manufacturer's "Oversized" Combination Socket type meter base with 7- Jaws
120/208	400	3-phase 4-wire	115	Meter Cabinet 1220/x 1220/300 mm (48x48x12 inches)
120/208	600	3-phase 4-wire	173	Meter Cabinet 1220/x 1220/300 mm (48x48x12 inches)
120/208	800	3-phase 4-wire	231	Meter Cabinet 1220/x 1220/300 mm (48x48x12 inches)
120/208	1000	3-phase 4-wire	288	Meter Cabinet 1220/x 1220/300 mm (48x48x12 inches)
347/600	200	3-phase 4-wire	166	Manufacturer's "Oversized" Socket type meter base with 7- Jaws
347/600	400	3-phase 4-wire	333	Meter Cabinet 1220x 1220x300 mm (48x48x12 inches)
Instrument Transformers Installed in a switch Gear Cubicle		3-phase 4-wire	500 kVA and Over	Meter Cabinet 813x 813x300 mm (32x32x12 inches) The instrument transformer cabinet must be connected to the Meter Cabinet with a 38 mm (1.5) conduit no longer than 9 m (30ft) complete with fish rope

#### NOTE:

For services other than those in table 'A' the Customer must get authorization from the Service Department. A switchgear manufacturer will not build the switchgear until they have the instrument transformers as specified by the Corporation. It is therefore essential the Customer contact the Service Department for co-ordination of delivering the Instrument transformers to the Manufacturer. Instrument transformers located in a 1220 x 1220 x 300 mm meter cabinet will be installed by the Corporation personnel. In all situations early contact with the Service Department is essential to receiving connect when desired.

## 8.3 TABLE B

## 8.4 HIGH DIRECT VOLTAGE FIELD TESTS

<b>SYSTEM VOLTAGE (kV rms) phase to phase</b>	<b>SYSTEM BIL (kV)</b>	<b>ACCEPTANCE TEST VOLTAGE (kV dc)</b>	<b>MAINTENANCE TEST VOLTAGE (kV dc)</b>
<b>4.16 kV</b>	<b>75</b>	<b>28</b>	<b>23</b>
<b>8.32 Kv</b>	<b>95</b>	<b>36</b>	<b>29</b>
<b>44 kV</b>	<b>250</b>	<b>125</b>	<b>95</b>

**NOTE:**

ACCEPTANCE TEST VOLTAGE DURATION IS NORMALLY 15 MIN. THE MAINTENANCE TEST VOLTAGE DURATION SHALL BE NOT LESS THAN 5, OR MORE THAN 15 MINUTES. WHEN OLDER CABLES, OR OTHER EQUIPMENT SUCH AS TRANSFORMERS, SWITCHGEAR, MOTORS ETC., ARE CONNECTED TO THE CABLE TO BE TESTED, LOWER VOLTAGES THAN THOSE LISTED IN TABLE B MAY BE NECESSARY.

\*MEASUREMENTS ARE IN ACCORDANCE WITH IEEE STD. 400-1991

## 8.5 TABLE C

8.6 MAXIMUM LOSSES FOR DISTRIBUTION TRANSFORMERS  
(CSA Standard C802-93, clause 4.2)**SINGLE PHASE**  
(Min. LV 120/240)

\*

**THREE PHASE**  
(Min. LV 208Y/120)

<b>KVA Rating</b>	<b>Maximum Loss, W</b>		<b>KVA Rating</b>	<b>Maximum loss, W</b>	
	<b>NL</b>	<b>L</b>		<b>NL</b>	<b>L</b>
<b>50</b>	<b>170</b>	<b>390</b>	<b>150</b>	<b>510</b>	<b>1300</b>
<b>75</b>	<b>210</b>	<b>570</b>	<b>225</b>	<b>710</b>	<b>2070</b>
<b>100</b>	<b>260</b>	<b>810</b>	<b>300</b>	<b>820</b>	<b>2190</b>

## 8.7 TABLE D

8.8 MAXIMUM LOSSES FOR POWER TRANSFORMERS  
**501 kVA – 3,000 kVA, HIGH VOLTAGE 44kV AND BELOW**  
(Clauses 4.3.1 and 4.3.2 of C802-93 )

<b>Kva</b> (Min LV 600)	<b>Imp. Range, %</b>		<b>Max. loss, W</b>	
	<b>Min.</b>	<b>Max</b>	<b>NL</b>	<b>L</b>
<b>1501 – 2000</b>	<b>5</b>	<b>7.5</b>	<b>4,200</b>	<b>12,200</b>
<b>2001 – 2500</b>	<b>5</b>	<b>7.5</b>	<b>5,000</b>	<b>14,100</b>
<b>2501 – 3000</b>	<b>5</b>	<b>7.5</b>	<b>5,600</b>	<b>16,200</b>