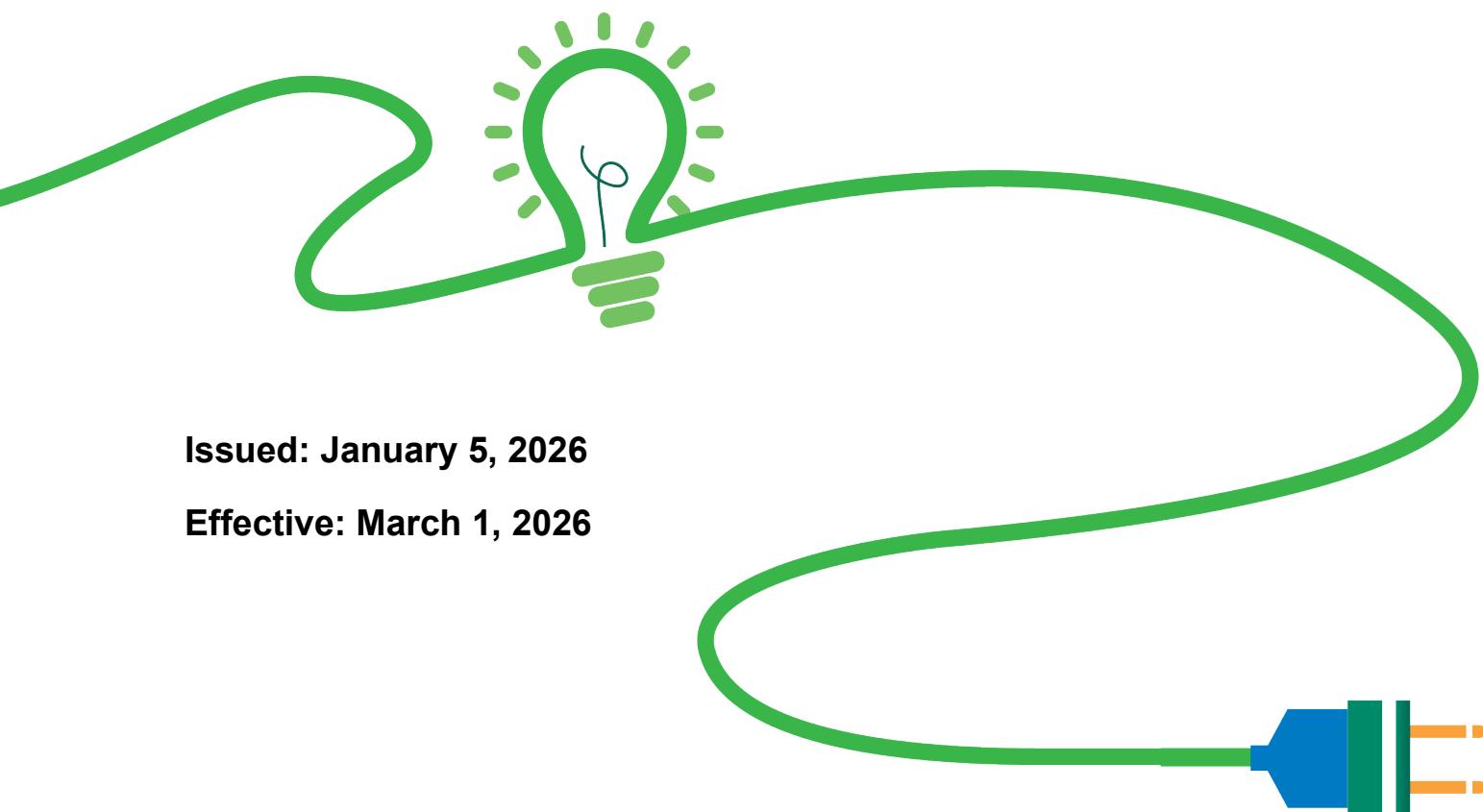




# **ENWIN Utilities Ltd.**

## **Conditions of Service**



**Issued: January 5, 2026**

**Effective: March 1, 2026**

## ENWIN Utilities Ltd.

### PREFACE

### CONDITIONS OF SERVICE

The Distribution System Code (“DSC”) requires that every distributor produce its own “Conditions of Service” document. The purpose of this document is to provide a means for communicating the types and levels of service available to Customers within ENWIN Utilities Ltd.’s (“ENWIN”) service area.

Acceptance of the supply of electricity or related services from ENWIN constitutes the acceptance of a binding contract with ENWIN including, but not limited to, these Conditions of Service and all terms and conditions set out herein. Any person that accepts the supply of electricity or related services (the “Customer”) shall be liable for payment for same, and such contract shall be binding upon their heirs, administrators, executors, successors or assigns.

This document follows the form and general content of the Conditions of Service required under the DSC, as well as additional information relating to ENWIN’s local characteristics and other specific requirements.

**Section 1 (Introduction)** contains references to the legislation that covers the Conditions of Services, the rights of the Customer and ENWIN, and the dispute resolution process.

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

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

Other sections include **Section 4 (Glossary of Terms)** and **Section 5 (Appendices)**.

Any subsequent changes to the Conditions of Service will be incorporated with each submission to the Ontario Energy Board (“OEB”), and the latest version is posted on ENWIN’s website and will be provided to Customers upon request. ENWIN may charge the Customer its costs for providing a copy of the Conditions of Service.

Any comments related to this document can be emailed to: [regulatory@enwin.com](mailto:regulatory@enwin.com). ENWIN may respond to any such comments, where appropriate, and it will file a summary of public comments received from Customers with the OEB.

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## **SECTION 1 INTRODUCTION**

### **1.1 Identification of Distributor and Service Area**

ENWIN Utilities Ltd. (“ENWIN”) is a corporation incorporated under the laws of the Province of Ontario, and a distributor of electricity that is generally located in and around Windsor, Ontario.

ENWIN is licensed by the Ontario Energy Board (“OEB”) to supply electricity to Customers as described in the Electricity Distribution Licence ED-2002-0527 issued to ENWIN on December 18, 2003 by the OEB (“Distribution Licence”). ENWIN may only operate distribution facilities within its licensed Territory as defined in Schedule 1 of its Distribution Licence, which is subject to change with the OEB's approval.

Additionally, there are requirements imposed on ENWIN under legislation, regulations and codes listed below in Section 1.2. Nothing contained in these Conditions of Service or in any contract for the supply of electricity by ENWIN shall prejudice or affect any rights, privileges, or powers vested in ENWIN by law under any legislation of the Legislature of Ontario or the Parliament of Canada, or any regulations thereunder.

#### **1.1.1 Distribution Overview**

ENWIN distributes electrical power through 27.6/16.0 kV primary distribution systems. On the 27.6/16.0 kV system most feeders are arranged to run in an open-loop fashion with open points between adjacent feeders. These feeders supply distribution transformers directly. The 27.6/16.0 kV system is a 4-wire system with generally 800 MVA of fault current available at the transformer station.

In the downtown core, ENWIN supplies Customers through a parallel feeder system with auto-transfer devices that switch power supply from one feeder to its parallel feeder should power be interrupted on the first feeder. This provides Customers with a more reliable power supply. The transfer will normally take place within 3 seconds after loss of power on the primary feed. The downtown distribution area boundaries are shown on the map in Section 5, Appendix 1.1.1.

The supply of electricity by ENWIN to any Customer will be at the primary voltage level of 27.6 kV.

#### **1.2 Related Codes and Governing Laws**

The supply of electricity or related services by ENWIN to any Customer shall be subject to legislation, related regulations, licences and codes, including the provisions of the latest editions of the following:

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

In the event of a conflict between the Conditions of Service and the legislation, licence and codes listed above, the provisions of the legislation, licence and codes shall prevail in the order of priority indicated above.

When planning and designing for electricity service, Customers and their agents must refer to and comply with all applicable provincial and Canadian electrical codes, and all other applicable federal, provincial, and municipal laws, regulations, codes and by-laws.

Without limiting the foregoing, all electricity service work shall be conducted in accordance with the latest edition of the Ontario *Occupational Health and Safety Act* ("OHSA"), the Regulations for Construction Projects and the harmonized Electric Utility Safety Association ("EUSA") rulebook.

### **1.3 Interpretations**

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

- Headings, paragraph numbers and underlining are for convenience only and do not affect the interpretation of these Conditions of Service;
- Words referring to the singular include the plural and vice versa;
- Words referring to a gender include any gender; and
- Any reference to duration of time in working days will be a reference to the normal working days of ENWIN and will not include any weekends, statutory holidays, or holidays recognized by ENWIN.

### **1.4 Amendments and Changes**

These Conditions of Service, and any amendments to same, form part of any contract between ENWIN and any Customer, Retailer or Generator. These Conditions of Service supersede all previous Conditions of Service, oral or written, of ENWIN including any of its predecessor municipal electric utilities as of the effective date.

In the event of changes to these Conditions of Service, ENWIN will issue advance notice with Customers' bills, and it may also issue a public notice in a local newspaper. ENWIN

will advise Customers of the proposed timeline for implementing the new Conditions of Service and invite comments from the public.

Customers are responsible for ensuring they have obtained the current version of these Conditions of Service, which can be found on and downloaded from [www.ENWIN.com](http://www.ENWIN.com). The Customer also has the option of contacting ENWIN to obtain a copy of the current version of these Conditions of Service. ENWIN may charge the Customer its costs for providing a copy of the Conditions of Service.

## **1.5 Contact Information**

ENWIN's head office is located at 4545 Rhodes Drive in Windsor, Ontario, and its mailing address is 4545 Rhodes Drive, P.O. Box 1625, Station A, Windsor, Ontario N8W 5T1.

ENWIN can be contacted for daily Customer service Monday to Friday between 8:30 a.m. and 4:30 p.m. by telephone at 519-255-2727, or such other numbers as ENWIN may advise on its website, or by email at [info@enwin.com](mailto:info@enwin.com).

For emergencies relating to the supply of electricity or other services, contact ENWIN via telephone at 519-255-2727 or such other numbers as ENWIN may advise through its website. Do not send an email or use social media to report an emergency.

## **1.6 Customer Rights**

All Customers shall have non-discriminatory access to ENWIN's distribution system and services in accordance with the terms of these Conditions of Service and applicable, legislation, regulations, licence(s), and codes.

ENWIN and its Customers will only be liable to each other for any damage that arises directly out of the willful misconduct or negligence of:

- ENWIN in providing distribution services to the Customer;
- The Customer in being connected to ENWIN's distribution system; or
- ENWIN or the Customer in meeting their respective obligations under these Conditions of Service, their licences and any other applicable legislation, regulation or code.

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

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

ENWIN assumes no risk and will not be liable for damages resulting from the presence of its equipment on the Customer's premises or appurtenances or for any action, omission, occurrence, or negligence by any persons over whom ENWIN has no control. Where ENWIN replaces a service, it will make every reasonable effort to leave the property in a similar condition. However, ENWIN will not be responsible for restoring the Customer's premises or appurtenances if they are disrupted or damaged in the course of replacing the Customer's service. This includes, without limitation, Customers' sod, landscaping, driveway, brush, sprinkler systems, fences, etc.

If an account is opened in more than one person's name, all those named are deemed to be the Customer and are jointly and severally responsible for compliance with these Conditions of Service and for the payment of rates and charges hereunder.

## **1.7 Distributor Rights**

### **1.7.1 Customer Information**

ENWIN may request certain information from the Customer including, without limitation, the Customer's credit report, driver's licence, date of birth, proof of sale of property, lease agreement, articles of incorporation or business registration, and/or references as appropriate.

Customers are obligated to provide ENWIN with information that is true, accurate and complete. The information is used and maintained in accordance with ENWIN's Privacy Policy.

If ENWIN is unable to establish the identity or legitimacy of a Customer based on the information provided, ENWIN may refuse to connect or refuse to continue to connect the Customer in accordance with these Conditions of Service and any applicable legislation, regulations or codes.

### **1.7.2 Access to Customer Property**

Section 40 of the *Electricity Act, 1998* provides ENWIN with the right to access private property to distribute electricity to its Customers in a safe and reliable manner, to inspect, read, maintain, repair, install, relocate, remove, operate or replace its equipment and to remove or trim trees.

ENWIN will normally access private property during its normal working hours and, if possible, provide the property owner with reasonable notice of its intended access. However, in situations where ENWIN, in its sole discretion determines there is a real or potentially dangerous condition, loss of power or other emergency, or when the property owner is not reasonably available to receive a notification, ENWIN may enter private property without notification.

In the event of a situation where a fault is located on a Customer's underground secondary cable, ENWIN reserves the right to install temporary jumper cables from a neighbouring service (line side of meter) to maintain power to the affected service until the fault is repaired.

Where ENWIN has lines or equipment on an easement, the *Electricity Act, 1998* provides ENWIN with rights to use those easements to provide services, including telecommunication services, or to authorize other parties to use those easements for the purpose of providing telecommunication services.

### **1.7.3 Safe, Unimpeded Access to Equipment**

ENWIN has a right to safe, secure, unobstructed and unimpeded access to its equipment located on Customer property. As such, where ENWIN equipment is located on Customer property, Customers must ensure that their property is well maintained so that ENWIN can access its equipment easily and safely.

Where an obstruction or encroachment is discovered on Customer property, ENWIN will notify the Customer and provide a reasonable time for the Customer to remove any obstructions or reduce any encroachment.

If the Customer does not remove the obstruction or reduce any encroachment on their property within the time specified or if ENWIN determines in its sole discretion that there is an emergency, hazard or risk to health and safety, ENWIN may disconnect the supply of electricity to the Customer and/or remove the obstruction or encroachment at the Customer's expense.

However, if ENWIN determines in its sole discretion that it is unsafe to access Customer property, it may refuse to send employees, contractors or agents to the Customer's property to make repairs or restore power until the Customer has removed the safety risk and, if repairs are required to do so, provided proof that the repairs have been certified by a professional engineer.

ENWIN is not liable to Customers for any damages resulting from work performed on ENWIN's equipment on or around Customer property, and it is not liable for any damages associated with the removal of obstructions or impediments to access its equipment on Customer property, including, for example, cutting locks. Nevertheless, ENWIN will make reasonable efforts to restore Customers' property after its work is performed.

ENWIN prefers to install and maintain its equipment in easily accessible locations. However, a Customer may ask ENWIN to install or move ENWIN's equipment to enclosed areas on the Customer's property, such as their vault or meter room. If ENWIN agrees, the Customer will have care and control of ENWIN's equipment and is responsible for ensuring the enclosed areas are only accessible by ENWIN and remain securely locked at all times. If such equipment is lost, damaged or destroyed by any cause other than ordinary wear and tear, the Customer will be liable to ENWIN for any and all costs to replace or repair the equipment.

#### **1.7.4 Operating Control**

ENWIN's distribution plant, infrastructure and equipment will remain the property of ENWIN, even if it is located on Customer property, and is exempt from seizure as set out in the *Electricity Act, 1998*.

Only employees of ENWIN or its authorized agents shall install, operate, inspect, maintain, repair, remove or replace ENWIN's distribution plant, infrastructure and equipment.

Customers will be required to pay the cost of repairs or replacement of any ENWIN or Customer equipment that has been damaged by the direct or indirect act or omission of the Customer or its agents.

#### **1.7.5 Voltage Supply and Customer Class**

ENWIN reserves the right to determine the voltage to be supplied to the Customer. For further explanation of the voltage of supply to a Customer's premises, refer to Section 2.3.4 - Standard Voltage Offerings.

ENWIN reserves the right to determine the Customer class into which a Customer shall be assigned. For further explanation of Customer classes, refer to these Conditions of Service as follows:

- Section 3.1 for Residential
- Section 3.2 for General Service
- Section 3.3 for General Service (Above 50 kW)
- Section 3.4 for General Service (Above 4,000 kW)
- Section 3.5 for Large Use (Above 5,000 kW)
- Section 3.6 for Dedicated Transformer Station
- Section 3.7 for Embedded Generation and Storage Facilities
- Section 3.8 for Embedded Market Participant
- Section 3.9 for Embedded Distributor
- Section 3.10 for Unmetered Connections

## **1.7.6 Tree and Vegetation Management**

Customers are responsible for all initial tree trimming for all new overhead lines that will be located on private property. Customers are also responsible for tree trimming and tree and brush removal around lines that are owned by the Customer and located on their private property. Clearances must conform to the Ontario Electrical Safety Code.

ENWIN will maintain tree clearance around all its distribution lines that are located on the public road allowances, easements and private property. ENWIN will also trim trees to provide clearance around Customers' service lines on private property. ENWIN will endeavour to discuss planned tree clearing with property owners prior to work being performed to mitigate the impacts to the environment and the property. However, in the event of homeowner absence or emergencies, ENWIN may be unable to notify the property owner prior to performing the work.

Customers are cautioned not to trim trees in proximity to powerlines. Customers concerned about tree clearance near their service lines may request ENWIN to trim trees, which will be at no cost to the Customer if the tree trimming is necessary to maintain sufficient tree clearance. While ENWIN will trim trees, it will not normally cut down trees in proximity to its lines on Customer property.

To permit the safe clearance of trees and vegetation from Customer-owned overhead lines, or where Customers wish to remove trees, Customers are required to contact ENWIN to request the disconnection and reconnection of the electricity supply prior to performing work. Where Customers request the disconnection of lines serving other Customers, the tree trimming work must be performed by qualified professional arborists and the length of the disconnection must be limited to a period of 4 hours. ENWIN may deny the disconnection request if it determines, in its sole discretion, that the disconnection may significantly and adversely affect other Customers or if ENWIN's employees, contractors, or agents are required to attend other emergencies or power outages.

Customers or their arborists are required to pay for the disconnection and reconnection of lines serving other Customers, but ENWIN will disconnect and reconnect the Customer's service without charge.

The Customer shall ensure that tree planting does not take place directly under high-voltage supply and service supply conductors or meters.

## **1.7.7 Ownership Demarcation – General**

"Ownership Demarcation" refers to the physical point at which ENWIN's responsibility for the electricity distribution equipment (conductors, switches, etc.) generally ends, and the

Customer's responsibility for the equipment begins. For example, some Customers will own lines located on their property.

The point of Ownership Demarcation will vary with the specific circumstances of the service connection and will be identified in the Connection Agreement between ENWIN and the Customer. However, not all electricity distribution equipment on the Customer side will belong to the Customer. For example, the meter and metering equipment (but not their housings) typically belong to ENWIN even though they may be situated on the Customer side of the Ownership Demarcation point. Similarly, ENWIN may have to install its equipment in Customers' vaults or meter rooms from time to time.

The Ownership Demarcation point is also the point at which codes governing electrical distribution systems stop applying. Rather, the Ontario Electrical Safety Code applies on the Customer side of the Ownership Demarcation point.

### **1.7.8 Maintenance of Customer Equipment and Property**

All electrical load equipment used by the Customer shall be subject to the reasonable review and approval of ENWIN. The Customer shall not engage in, authorize or permit any act, omission or negligence that could endanger ENWIN's distribution infrastructure, assets, plant or equipment. The Customer shall also refrain from causing, whether directly or indirectly, any unacceptable variation in ENWIN's line voltage as determined by ENWIN in its sole discretion.

Where the Customer has multiple meters serving leased units in the Customer's building, the Customer shall ensure that they meet the requirements in accordance with Section 2.3.7.1.1 - Metering Requirements for Multi-Unit Buildings.

Customers must comply with all aspects of the Ontario Electrical Safety Code and must correct any deficiencies in a timely manner. If a Customer does not promptly resolve an identified hazard or deficiency, ENWIN may disconnect the supply of electricity to the Customer. If, in ENWIN's sole discretion, the deficiency is imminently dangerous to persons or property, ENWIN may immediately disconnect the Customer's service without notice.

The Customer is responsible for providing, inspecting, repairing, replacing and maintaining in a safe condition all their equipment and infrastructure in a manner satisfactory to both the Electrical Safety Authority and ENWIN. Equipment and infrastructure includes both the Customer's electrical equipment located on the Customer's side of the Ownership Demarcation point and the civil infrastructure including but not limited to transformers, cable, switches, poles, transformer pads, duct banks, fences, gates, conduits, transformer rooms, transformer vaults, service masts and clevises.

The Customer is responsible for maintaining their property in a condition that is safe and that does not adversely affect the operation or threaten the integrity or reliability of ENWIN's distribution infrastructure, assets, plant or equipment nor adversely affect the reliability or power quality of electricity delivered to ENWIN's Customers. Without limiting the generality of the foregoing, Customers shall not, for example, plant trees underneath overhead lines or excavate pits around poles.

The Customer shall inspect and maintain all equipment, infrastructure, and property for which they are responsible at regular intervals. When access to such equipment, infrastructure, or property is under the control of ENWIN (e.g. a transformer vault or a fenced off transformer), the Customer shall contact ENWIN in advance to make appropriate arrangements (e.g. access or temporary disconnection) before undertaking any inspection, maintenance, repair, or replacement activities. Customers are encouraged to adopt condition-based maintenance practices, including predictive inspections, to ensure infrastructure remains in safe operating condition.

For Customer-owned vaults that contain only ENWIN equipment, ENWIN will provide the Customer with one vault access every 12 months at no charge, scheduled during ENWIN's normal working hours. Appointment times are not guaranteed. For Customer-owned vaults that contain ENWIN equipment and the Customer-owned main switch, ENWIN will not restrict Customer access to the vault and will use "horseshoe locks", as these allow Customer access to the vault without needing to remove ENWIN's lock. Customers must ensure that any locking mechanism used does not impede ENWIN's emergency access.

If the Customer fails to inspect, maintain, repair, or replace their equipment, infrastructure or property for which they are responsible as required in a timely manner, ENWIN may, in its sole discretion, disconnect the supply of electricity to the Customer. Such disconnection may remain in effect until the Customer has completed all necessary inspections, maintenance, repairs or replacements to the satisfaction of ENWIN.

Where ENWIN identifies deficiencies to walls, ceilings, floors, doors, vents, drains, electrical devices or other elements, ENWIN may notify the Customer of the deficiencies and provide a reasonable time for the Customer to correct the deficiencies.

If the Customer does not correct the deficiencies within a reasonable time, or if the corrections are not considered adequate by ENWIN or an inspection authority, ENWIN may disconnect the supply of electricity to the Customer or correct the deficiencies at the Customer's expense. However, ENWIN may refuse to attend the Customer's property, even if the Customer is without power, until the Customer has corrected the deficiency and, if applicable, provided proof that the correction was certified by a professional engineer.

### **1.7.9 Allocation of Electrical Supply**

If the supply of electricity to ENWIN is interrupted or restricted for any reason, ENWIN has the right to allocate the available supply of electricity to its Customers as it determines in its sole judgment. Any allocation of electricity during times of restricted supply shall not be deemed a breach of any contract.

### **1.7.10 Force Majeure**

Neither ENWIN nor the Customer shall be deemed to have committed an act of default in respect of any obligation under contract, these Conditions of Service or the Distribution System Code if either party is prevented, wholly or partially, from performing those duties or obligations because of a Force Majeure event pursuant to the Distribution System Code.

### **1.8 Disputes**

If a Customer has a complaint about ENWIN regarding services provided by ENWIN under its Distribution License, the Customer may contact a Customer Care Representative at 519-255-2727 during regular business hours, between 8:30 AM and 4:30 PM Monday to Friday, or e-mail the complaint to [servicecomplaints@ENWIN.com](mailto:servicecomplaints@ENWIN.com).

Upon receipt of a complaint, an ENWIN Customer Care Representative will contact the Customer to acknowledge receipt of the complaint and, if possible, to resolve the complaint, and will investigate and follow-up on the complaint as required to resolve the complaint. A copy of ENWIN's Customer Complaints Resolution Process can be found at <https://ENWIN.com/Customer-dispute-resolution/>.

If a complaint cannot be resolved by contacting one of ENWIN's Customer Care Representatives, the Customer has the option to contact ENWIN's regulator, the OEB. Information about how to file a complaint with the OEB can be found on its website at <https://www.oeb.ca/consumer-protection/make-complaint> or by calling the OEB at 1-877-632-2727 (toll-free within Ontario) or 416-314-2455. Other methods to contact the OEB can be found at: <https://www.oeb.ca/contact-ontario-energy-board>.

## **SECTION 2 DISTRIBUTION ACTIVITIES (GENERAL)**

### **2.1 Connections**

#### **2.1.0 Process and Timing**

Consistent with the Distribution System Code, ENWIN will either connect or make an Offer to Connect (the "Offer") any Customers that lie within its service area. The form of the Offer and its terms and conditions may vary in accordance with ENWIN's

requirements for connecting a Customer to ENWIN's distribution system.

The Customer or its representative shall consult with ENWIN 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. ENWIN will confirm, in writing, the characteristics of the electricity supply.

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

- The timely provision of electricity supply to new and upgraded premises; or
- The availability of adequate capacity for additional loads to be connected in existing premises.

ENWIN shall make every reasonable effort to respond promptly to a Customer's request for connection. ENWIN shall respond to a Customer's written request for connection within the timeline required by the Distribution System Code. ENWIN will make the Offer within the timeline required by the Distribution System Code, unless other necessary information is required from the Customer before the Offer can be made.

Any Customer that wishes to operate a generator that is electrically connected to ENWIN's distribution system shall apply in writing to ENWIN for permission to make that connection and/or to obtain an Offer from ENWIN. This applies to all Generators including those that wish to operate on the Customer side of the meter and to electricity storage facilities that supply load.

ENWIN shall make every reasonable effort to respond promptly to a Generator's or another Distributor's request for connection. ENWIN shall provide an initial consultation regarding the connection process within the timeline required by the Distribution System Code. The Offer to connect a Generator or Distributor to ENWIN's distribution system shall be made within the timeline required by the Distribution System Code, unless other necessary information outside of ENWIN's control is required before the Offer can be made. Requirements regarding Connection Agreements are set forth in Section 2.1.7, Contracts, and in Section 3.7, Embedded Generation and Storage Facilities.

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

Any Customer that wishes to connect non-residential electric vehicle supply equipment ("EVSE") to ENWIN's distribution system should refer to Appendix 6 for additional connection requirements.

In addition to any other requirements in these Conditions of Service, the supply or acceptance of electricity is conditional upon ENWIN being permitted and able to provide or accept such a supply, obtaining the necessary apparatus, equipment, material,

easements and constructing works to provide the service, and the Customer having made an application and, in so doing, providing the necessary information and payments. Should ENWIN not be permitted or able to provide or accept such a supply, it is under no responsibility to the Customer whatsoever and the Customer releases ENWIN from any liability in respect thereto.

### **2.1.1 Building that Lies Along**

The term "lies along" means a Customer property or parcel of land that is directly adjacent to or abuts onto the public road allowance or easement where ENWIN has distribution facilities of the appropriate voltage and capacity.

ENWIN will connect a building or facility that "lies along" its distribution line, provided:

- a) The building can be connected to ENWIN's distribution system without an expansion or enhancement; and
- b) The service installation meets the conditions listed in these Conditions of Service.

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

#### *2.1.1.1 Connection Charges*

For Residential class Customers, ENWIN generally recovers costs for a Basic Connection through its distribution revenues. As such, there will be no up-front charge for a simple overhead or underground Basic Connection. However, there will be an administrative account setup charge, as noted in ENWIN's Tariff of Rates and Charges.

Included in ENWIN's "Basic Connection" are the following:

- Supply and installation of up to 30 m of 3/0 AI overhead or underground secondary triplex conductor for up to a 200A service;
- Supply and installation of one (1) residential 120/240 3-wire single phase, smart meter;
- Transformation capable of supplying a residential load up to 5 kW; and
- Connection to the distribution plant at prescribed demarcation points.

Where Customer connection requirements exceed the Basic Connection, there may be additional Variable Connection charges associated with the installation of assets and/or any expansion of the distribution system. ENWIN will recover the account setup charge and the Variable Connection costs directly from the Customer in separate payments prior to connection, as set out in more detail below. These Variable Connection costs shall be based on actual costs ENWIN incurs.

## 2.1.2 Expansions / Offer to Connect

If the connection required to connect a Customer exceeds the Basic Connection and/or if an expansion or enhancement to ENWIN's distribution system is required to connect the Customer, ENWIN will make an Offer to the Customer. ENWIN will normally provide a firm Offer. However, the Customer may request and ENWIN in its sole discretion may choose to provide an Offer that is an estimate.

ENWIN's Offer shall include:

1. A description of the facilities that are to be constructed.
2. An estimate of the amount that will be charged to the Customer to construct the distribution system expansion necessary to make the connection.
3. Costs, broken down into engineering, materials, labour, equipment and administrative costs.
4. A description of the contract/agreements (i.e. Connection, Easements, etc.), which are required, stating timing, terms and conditions. Further details are contained in Section 2.1.7 of this Conditions of Service.
5. Whether the Offer is firm or an estimate of the costs that would be revised in the final payment to reflect actual costs incurred.
6. Whether the Offer includes work for which the Customer may obtain an alternative bid and, if so, the process by which the Customer may obtain the alternative bid.
7. An estimate of the Customer's load upon which the design, estimate and determination of the charge has been based.
8. Reference to these Conditions of Service and information on how the person requesting the connection may obtain a copy.
9. A time frame over which the Offer will remain valid.
10. An outline of the responsibilities of the Customer regarding the Connection or Expansion.
11. Any conditions attached to the Offer.
12. An instruction on how the Customer may direct ENWIN to proceed.

Prior to making the Offer, ENWIN shall perform an initial economic evaluation ("Initial Economic Evaluation") based on estimated costs and forecasted revenues of the expansion project, as described in Appendix B of the Distribution System Code, to determine if the future revenue from the Customer(s) will pay for the capital and on-going maintenance costs of the expansion project. This will also determine the Customer's share, if any, of the initial capital costs of the expansion ("Initial Capital Contribution"). For information about the Final Economic Evaluation & Capital Contribution Settlement see Section 2.1.2.2.

This Initial Economic Evaluation will take into consideration the cost of the expansion, the number and type of Customers expected to be connected by the expansion within the applicable connection horizon, as defined in the DSC, and the revenue from those Customers, less the operation and maintenance costs of the facilities. ENWIN will compute the Customer charge by applying a revenue horizon that is consistent with Appendix B of the DSC.

Where there is insufficient information to adequately estimate the Customer's projected load, ENWIN may at its sole discretion collect cash or cash equivalent security from the Customer as an expansion deposit to guarantee the load forecast. ENWIN may determine the actual amount of the Customer's load after reviewing 12 consecutive months of consumption that occur within 24 months of connection. For more information about expansion deposits see Section 2.1.2.3 of these Conditions of Service.

New Customers may connect to the distribution system during the applicable connection horizon of the expansion ("Unforecasted Customers"). As they will benefit from the earlier expansion, Unforecasted Customers shall be required to contribute to any capital cost of the expansion charged to the original Customer(s). In such an event, the original contributor(s) shall then be entitled to a rebate from ENWIN. For more information see Section 2.1.2.4: Rebates of Capital Contribution.

ENWIN shall in all cases calculate the "Estimated Incremental Revenues" of new Customers using the "fixed charge" and the "variable charge" that have been approved by the Ontario Energy Board for the Rate Class applicable to each individual new meter installed in connection with the expansion project and applicable accounting standards.

When an expansion of the distribution system is planned to serve multiple residential subdivisions and other customer connections within a qualifying development area, as defined in section 3.2A of the DSC, ENWIN may establish a Capacity Allocation Model ("CAM") to allocate capacity and costs associated with that expansion. An established CAM will align with the methodology outlined in Appendix I of the DSC.

#### *2.1.2.1 Alternative Bid Work / Offer to Connect*

For any plans submitted to ENWIN for an expansion project, ENWIN will provide one estimate Offer at no expense to the Customer. This estimate Offer can only be provided after a preliminary review is conducted by ENWIN based on receiving all the appropriate information from the Customer. The preliminary review and preparation of the estimate Offer is expected to take up to 60 days after all the required information is submitted to ENWIN.

If the Customer submits revised plans to ENWIN or requests an estimate or firm Offer for a different servicing plan, ENWIN will provide a new Offer based on the revised plans, within a further 60 days, however ENWIN's incremental costs associated with the Customer's revision of plans shall be at the Customer's expense.

Where a Customer is required to make a capital contribution to an expansion, the Customer may choose to obtain an alternative bid for the portion of the work that is eligible for alternative bids. The following activities are not eligible for alternative bids:

- a) Distribution system planning; and
- b) The development of specifications for any of the following:
  - i. the design of an expansion;
  - ii. the engineering of an expansion; and
  - iii. the layout of an expansion.

In addition, work that involves existing circuits or requires physical contact with ENWIN's existing distribution system is not eligible for alternative bids, unless ENWIN explicitly provides otherwise in writing, and ENWIN will be solely responsible for any temporary de-energization of any portion of its existing distribution system.

In the case of a residential subdivision, where the Customer has chosen to obtain an alternate bid and arrange the work themselves, ENWIN will reimburse the Customer their costs of performing the work up to the maximum investment which the economic evaluation allows, provided this does not exceed the Customer's or ENWIN's cost to perform the work.

If an Alternative Bid is pursued, ENWIN will:

1. Require the Customer to select and hire a contractor from ENWIN's prequalified list of contractors. ENWIN may determine, in its sole discretion, whether a contractor is added or removed from its prequalified list.
2. Require the Customer to pay the contractor for the work eligible for the alternative bid and assume full responsibility for the construction and completion of that aspect of the expansion.
3. Require the Customer to be responsible for administering the contract associated with the alternative bid. Administering the contract includes acquisition of all required permissions, permits and easements.
4. Require the Customer to ensure that the work eligible for the alternative bid is done in accordance with ENWIN's distribution system planning and specifications for the design, engineering, layout, and materials for the expansion.
5. Require the Customer to obtain ENWIN's review and approval of plans for the design, engineering, layout and work execution for the work that is eligible for alternative bid to ensure conformance with the distribution system planning and specifications prior to commencing the work.
6. Reserve the right to inspect and approve all aspects of the constructed facilities, in accordance with ENWIN's construction standards, which are available upon request, as part of a system commissioning activity, prior to connecting the constructed facilities to the existing distribution system. ENWIN's review, inspection and/or approval of the works does not absolve the Customer of their responsibility to properly construct and warranty those works.

In addition to the capital contribution amounts referenced above, ENWIN will charge a Customer that pursues an alternative bid any costs it incurs associated with the expansion including, but not limited to:

- ENWIN's costs for additional design, engineering, or installation of facilities required to complete the project.
- ENWIN's costs associated with any temporary de-energization of any portion of the existing distribution system and for dressing and connecting any transformers, switches, cable poles, or other connections as determined by ENWIN in its sole discretion.
- ENWIN's costs associated with any plan or other reviews and approvals, including costs for inspection or approval of the work performed by the contractor hired by the Customer.
- ENWIN's costs of administering the contract between the Customer and contractor hired by the contractor if ENWIN is asked to do so and agrees.

The Customer must transfer the expansion facilities that are constructed under the alternative bid to ENWIN upon completion and energization by ENWIN. When the Customer transfers the expansion facilities to ENWIN, the charges referred to above will be included as part of the Customer's costs to determine the transfer price.

When the Customer has exercised the alternative bid option and transfers the expansion facilities to ENWIN, the transfer price will be the lower of the Customer's costs to construct the expansion facilities or the amount set out in ENWIN's initial Offer to perform the work. If the Customer does not provide ENWIN with their cost information within 30 days of the expansion facilities being energized, then ENWIN may use the amount set out in its initial Offer as the transfer price instead of the Customer's cost.

#### *2.1.2.2 Final Economic Evaluation & Capital Contribution Settlement*

ENWIN will carry out a second economic evaluation ("Final Economic Evaluation") as required by the Distribution System Code once the expansion facilities are energized.

If the Offer is firm, the alternative bid option was chosen, and the facilities are transferred to ENWIN, the Final Economic Evaluation shall be based on the amounts used in the firm Offer for costs and forecasted revenues, any transfer price paid by the distributor to the customer, and the methodology described in Appendix B of the Distribution System Code.

If the Offer is an estimate, ENWIN's Final Economic Evaluation will be based on forecasted revenues, actual costs incurred (including costs for the work that was not eligible for the alternative bid and any transfer price paid by ENWIN), and the methodology described in Appendix B of the Distribution System Code.

If the required capital contribution amount from the Final Economic Evaluation (“Final Capital Contribution”) differs from the required Initial Capital Contribution, the Customer will be responsible for the Final Capital Contribution and not the Initial Capital Contribution. ENWIN and the Customer shall arrange to settle any amounts owing as necessary, including by way of set off. ENWIN will provide the Customer with the calculation used to determine the Final Capital Contribution amount including all of the assumptions and inputs used at no cost to the Customer.

Unless they are a Distributor or Embedded Generator, the Final Capital Contribution that ENWIN will require the Customer to pay shall not exceed the Customer’s share of the difference between the present value of the projected capital and on-going maintenance costs for the facilities and the present value of the projected revenue for the distribution services provided by those facilities. For all Customers, 100% of the shortfall between the capital costs and the net present value of the net revenues will be collected as a charge prior to connection.

#### *2.1.2.3 Expansion Deposit*

An expansion to ENWIN’s distribution system results in Expansion Costs and Operating, Maintenance and Administrative Costs. As any capital contribution that the Customer pays ENWIN may not fully offset these costs, ENWIN may require the Customer to provide an expansion deposit in addition to the capital contribution.

The expansion deposit is intended to cover the forecast risk that the load assumed in any economic evaluation materializes. In addition, where the Customer opts to proceed with an alternative bid, the expansion deposit is intended to address the risk that the constructor may fail to construct the facilities or assets properly and as intended.

ENWIN will require the Customer to provide the expansion deposit, as contained in the Offer, prior to the commencement of any expansion work or the installation of any connection assets.

Where a Customer intends to exercise the alternative bid option, ENWIN may require the Customer to post an expansion deposit in an amount equal to the costs for the expansion work that is ineligible for alternative bid (the “Initial Expansion Deposit”), prior to the commencement of any expansion work or the installation of any connection assets.

Once the expansion facilities are energized, and ENWIN has conducted a Final Economic Evaluation and determined a Final Capital Contribution amount, ENWIN may require the Customer to post an additional deposit to be added to the Initial Expansion Deposit such that the total expansion deposit, made up of the Initial Expansion Deposit and the additional deposit (collectively the “Total Expansion Deposit”), is equal to the difference between the costs associated with the expansion as outlined in Section 2.1.2, including the transfer price, and the amount of the Final Capital Contribution.

ENWIN may retain or realize on any expansion deposit from the Customer for the purposes of covering any amounts that the Customer owes to ENWIN pursuant to the Offer. These amounts may include an outstanding capital contribution, and the costs associated with completing, repairing, or bringing up to standard the expansion facilities (e.g. bringing expansion facilities up to proper design and technical specifications, or ensuring that facilities operate properly when energized).

In addition, for Customers that exercise the alternative bid option, ENWIN's expansion deposit will also include a deposit of 10% of total capital costs for warranty. ENWIN may retain this 10% deposit of the Total Expansion Deposit, for a warranty period of up to two (2) years and may apply such deposit to any work required to repair the expansion facilities within the warranty period of two (2) years. At the end of the warranty period, ENWIN shall return to the Customer the unused portion of the Total Expansion Deposit that was retained for the warranty period.

The two-year warranty period begins at the end of the "Realization Period". The Realization Period for a project ends upon the first to occur of: 1) the materialization of the last forecasted connection (for residential developments) or the last forecasted demand (for commercial and industrial developments) in the expansion project; or 2) the completion of the applicable connection horizon from the date of energization of the expansion facilities.

Any expansion deposit must be either in the form of: (i) cash; (ii) an irrevocable commercial letter of credit issued by a Schedule I bank as defined in the *Bank Act*; or (iii) surety bond, but the form of deposit must expressly provide for its use to cover the events for which it is held as a deposit.

Except for the warranty portion of the Total Expansion Deposit which shall be retained for the duration of the warranty period, once the facilities are energized, ENWIN shall reduce any expansion deposit amount at the end of each 365-day period as specified in the Offer. The amount of the reduction at the end of each 365-day period is calculated by multiplying any expansion deposit by a percentage, less any portion that ENWIN has retained or realized. The percentage is derived by dividing the actual connections (for residential developments) or actual demand (for commercial and industrial developments) completed or materialized in that 365-day period, incremental to any connections completed or demand that materialized in any previous 365-day period, by the total number of connections (for residential developments) or actual demand (for commercial and industrial developments) contemplated in the Offer.

For commercial and industrial expansions, ENWIN will release the balance of any part of the expansion deposit related to forecast risk that is held (not including any warranty amount) once the load reaches a minimum of 90% of the forecast load. For residential subdivision expansions where the Customer chooses an alternative bid process to construct the electrical infrastructure, ENWIN will hold the transfer cost to be paid to the Customer, as determined by ENWIN's economic model as the expansion deposit related to forecast risk and will return that deposit to the Customer over the connection horizon as residential load connections are realized on the constructed facilities. These payments

will be made annually throughout the connection horizon. The connection horizon is a period of time (typically 5 to 15 years) following the date of energization of the new expansion facilities.

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

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

#### *2.1.2.4 Rebates of Capital Contribution*

As noted above, when a new Customer connection or the addition of new load necessitates an expansion to ENWIN's distribution system, ENWIN conducts an economic evaluation. The economic evaluation considers costs associated with the expansion and forecasts revenues that the expansion will enable. An Unforecasted Customer will be required to contribute a fair share of the cost that was incurred to construct the expansion if, within the applicable connection horizon, they:

- Connect a new load to ENWIN's expansion facilities;
- Derive a benefit from the expansion facilities; and
- The new load had not been forecasted and not included in the economic evaluation.

In such a case, ENWIN shall collect the fair share from the Unforecasted Customer and shall provide that share as a rebate to the original contributor(s) (i.e. the Customer that initially paid the required capital contribution) to the expansion.

The amount of the fair share of the Unforecasted Customer, and therefore the amount of the rebate to the capital contribution of the original contributor(s), will be determined by ENWIN by apportioning the overall benefits associated with the expansion between the Unforecasted Customer and the original (or previous) contributor(s). If applicable, ENWIN may consider any or all of the following factors when apportioning the overall benefits:

- (a) The relative name-plate rated capacity of the connections;
- (b) The relative load levels;

- (c) The line length that the Unforecasted Customer requires in comparison to the line length that the original contributor(s) requires in the context of the expansion;
- (d) The proportion of the connection horizon period after the energization date of the expansion that the Unforecasted Customer will be connected to the ENWIN distribution system; and
- (e) Any other factor that ENWIN, in its sole discretion, considers to be relevant to the determination.

Any rebate of Customer capital contribution that may be due to the original contributor(s) shall remain payable to the original party contracting with ENWIN unless ENWIN is notified in writing by the original contributor(s) that this right has been assigned to another successor party.

#### *2.1.2.5 Feeder Capacity Optimization*

ENWIN will provide service to the Customer during the Realization Period based upon the estimate of the Customer's load set out in the Offer that has been signed by the Customer (the "Estimated Incremental Demand"). However, unused capacity will not be reserved past the Realization Period.

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

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

#### **2.1.3 Connection Denial**

ENWIN is not obligated to connect or continue to connect a Customer, person or entity within its service territory to its distribution system or sell or convey electricity to any such Customer, person or entity for any of the following reasons:

- Contravention of existing laws of Canada or the Province of Ontario, including the Ontario Electrical Safety Code;
- Violations of conditions in ENWIN's Distribution Licence;
- Use of an ENWIN distribution system line for a purpose that it does not serve and that ENWIN does not intend to serve;

- A materially adverse effect on the reliability or safety of ENWIN’s distribution system;
- Public safety reasons or imposition of an unsafe work situation beyond normal risks inherent in the operation of ENWIN’s distribution system;
- A material decrease in the efficiency of ENWIN’s distribution system;
- A materially adverse effect on the quality of distribution services received by an existing connection;
- If the person requesting the connection owes ENWIN money for distribution services, or attempts to intentionally avoid bill payments by applying or re-applying for a new account under a different account-holder name, or otherwise acts fraudulently;
- Potential increases in monetary amounts that already are in arrears with ENWIN;
- If an electrical connection to ENWIN’s distribution system does not meet ENWIN’s design requirements;
- ENWIN has not received a valid certificate of inspection for the premises from the Electrical Safety Authority;
- The premises is in violation of the building code;
- ENWIN’s distribution system at the location is not capable of providing the desired connection and the Customer does not accept ENWIN’s Offer;
- Refusal by the Customer to enter into a Connection Agreement for service as required by ENWIN;
- Failure of the Customer to open an account, including satisfying the documentation requirements of Section 2.4.1 in these Conditions of Service;
- Failure by the Customer to meet ENWIN’s Security Deposit requirements outlined in these Conditions of Service;
- The Customer is not within ENWIN’s licensed service territory;
- The line by which the Customer’s building “lies along” is a line that has been dedicated by ENWIN as a sole feed for a specific Customer or purpose; or
- Violation of any other conditions documented in ENWIN’s Conditions of Service.

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

## **2.1.4 Inspections Before Connection**

All Customer electrical installations must be inspected and approved by the Electrical Safety Authority and must also meet ENWIN's requirements. In particular:

- Temporary services, which are typically used for construction purposes and for a period of twelve months or less, must be approved by the Electrical Safety Authority and must be re-inspected should the period of use exceed twelve months.
- Customer-Owned substations must be inspected by both the Electrical Safety Authority and ENWIN.
- Transformer rooms must be inspected and approved by ENWIN prior to the installation of ENWIN's equipment.
- Duct banks shall be inspected and approved by ENWIN prior to the pouring of concrete and again before backfilling. The completed ducts must be rodded by the site contractor in the presence of an ENWIN inspector and shall be clear of all extraneous material. A mandrel, approved by ENWIN for a nominal diameter of duct, will be passed through each duct. In the event of ducts blocked by ice, the Customer'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 ENWIN. All work done on existing ENWIN plant must be authorized by ENWIN and carried out in accordance with all applicable safety legislation and regulations.

ENWIN requires notification from the Electrical Safety Authority of this approval prior to the energization of a Customer's supply of electricity. Provision for metering shall also be inspected and approved by ENWIN prior to energization.

Where a "Connection Authorization" from the Electrical Safety Authority has been issued to ENWIN, it is valid for the connection of a service for a period of up to six months from the date of issue. If the connection of service has not been completed after six months, a new "Connection Authorization" is required. 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.

## **2.1.5 Relocation of Plant**

With respect to the location of its plant, ENWIN will exercise its rights and comply with all obligations under legislation (e.g. the *Public Service Works on Highway Act*), regulations, agreements, easements, and at common law. Where ENWIN's plant is located on private property without a formal easement and a right for the plant to remain has crystallized through adverse possession, ENWIN shall rely on that right to keep, operate, maintain and replace that plant in its existing location.

Customers may request that ENWIN relocate its plant from time to time. Unless an existing agreement says otherwise, ENWIN is not required to provide for or share costs associated with any such relocation. However, ENWIN will consider any request to

relocate its plant in a fair and reasonable manner that takes into account the interests of all Customers. For example, ENWIN will not relocate its plant to the location proposed by the Customer if it will become a new encumbrance to another Customer. If a Customer requests that ENWIN relocate its plant, ENWIN will provide an explanation of its decision to the Customer.

If it is technically feasible and not contrary to the interests of all Customers, ENWIN will offer to relocate the plant and provide the Customer with an estimate of the cost, which will be fair and based on cost recovery principles. Unless an agreement provides otherwise, the Customer will be responsible for all costs associated with the relocation. In addition, the Customer must provide ENWIN with the easement it requires for the relocation of the plant on private property, the size and terms of which are to be determined by ENWIN in its sole discretion, and the Customer must register the easement in favour of ENWIN. The Customer will also be responsible for all costs associated with the easement including registering the easement.

As set out above, where an expansion necessitates a temporary or permanent relocation or support of the plant used to serve the Customer, the costs of such relocation shall be borne by the Customer and shall not be included in the costs subject to set off through the application of an economic evaluation of the project.

Where a Customer's construction has required a relocation of ENWIN's plant to maintain required clearances, the Customer shall be responsible for the costs of such relocation, even if it is temporary, and/or the removal of the Customer's construction. In addition, where a Customer changes a use (i.e. builds a structure under or near a distribution line) which represents a code or easement violation, then the Customer shall bear the cost of relocation of the plant. This may be applied retroactively at the discretion of ENWIN, with consideration given to the length of time the situation has existed and whether or not the Customer should have known the rules in this regard. However, where a Customer demolishes a building on a property to build a new building, the costs for disconnection and to remove salvageable plant shall be borne by ENWIN.

ENWIN will bear a reasonable cost to disconnect plant, where feasible, for Residential Customers to remove trees, shingle roofs, etc. in the interest of safety, so that Customers do not attempt to "work around" a potentially hazardous situation to avoid cost. Such temporary disconnections and removals shall be undertaken such that other Customers are not unduly inconvenienced. However, General Service Customers shall bear the cost of any temporary disconnections or other measures. The feasibility of relocating or temporarily disconnecting plant and the reasonability of costs shall be determined by ENWIN on a case-by-case basis.

Where ENWIN would otherwise replace its plant because of deteriorated condition, and a Customer requests that the plant be relocated when replaced, then ENWIN shall endeavor to accommodate such requests within the guidelines noted above. Where additional costs are incurred to perform the relocation, the Customer would be liable for the increase in costs only. This would apply where plant replacement for condition is

imminent. Where plant replacement is not immediately imminent, Customers would be liable for full relocation costs and not be eligible for an offset in the relocation cost to the extent of the value of the betterment of the plant.

This policy does not apply to cases where ENWIN's plant is relocated because it has been damaged. ENWIN will not normally relocate its plant when it has been damaged. However, if ENWIN does relocate its plant because it has been damaged, all costs incurred are recoverable from the party responsible for the damage and/or any customers requesting that the damaged plant be relocated.

## **2.1.6 Easements**

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

If ENWIN determines in its sole discretion that it requires an easement on a Customer's property to provide them with service, the Customer will obtain the necessary registered easements in favour of ENWIN and pay all costs associated with obtaining the easement including ENWIN's costs to review plans and easement documents as well as the cost of registering the easement.

ENWIN may choose to connect the Customer upon receipt of a properly executed Letter of Intent to Grant Easement. Alternatively, ENWIN may withhold the provision of connection and service pending receipt of proof of registration of the requested easements. ENWIN may also require the Customer to provide a deposit pending registration of an easement in favour of ENWIN, with such deposit to be returned without interest upon receipt of proof of registration of the requested easements.

If access to private property other than the property of the Customer requesting a connection is necessary for the installation, operation and maintenance of the distribution assets, the Customer will obtain the necessary registered easements in favour of ENWIN and pay all costs associated with obtaining the easement. Where it is necessary to cross the property of a third party to serve a Customer and the Customer is unable to obtain such an easement from the third party, ENWIN shall be under no obligation to provide service to the Customer.

Where land on which ENWIN has an easement or a right of adverse possession has been encumbered by the erection of a building, fence, pavement, or other structure, or the planting of any tree or shrub, ENWIN shall be under no obligation to work around, repair or replace such encumbrances nor shall ENWIN be liable for any damages to such encumbrances in the course of operating, maintaining or replacing its plant. ENWIN may request the landowner to remove any such obstructions, at the landowner's cost.

## 2.1.7 Contracts

**1. Implied Contract** - In all cases, notwithstanding the absence of a written contract, the taking and using of electrical energy and/or distribution services from ENWIN constitutes the acceptance of a written or implied contract with ENWIN, and the person or persons so accepting shall become a Customer liable for payment for such energy and/or services. The contract shall be binding upon the Customer and their heirs, administrators, executors, successors or assigns. The terms and conditions of any such contract are embedded within these Conditions of Service, the Rate Handbook, ENWIN's rate schedules, ENWIN's Distribution Licence and all other regulatory codes issued by the OEB, all as amended from time to time.

**2. Connection Agreement for New or Modified Service** – ENWIN may require Customers to enter into a Connection Agreement for new or modified electrical service that requires ENWIN to invest more than \$10,000. The Connection Agreement will define the terms and conditions that will apply to the provision of such services. ENWIN will connect the Customer upon:

- Execution by the Customer and ENWIN of the Connection Agreement;
- Payment in full for any monies owing to ENWIN related to the connection or related to any other arrears of the Customer. At its option, ENWIN may choose to accept a Purchase Order or Letter of Credit from the Customer, provided the Customer would also be the account holder of the service;
- Receipt by ENWIN of notification of any inspection approvals or other approvals which may be required; and
- Registration by the Customer of any easements in favour of ENWIN, which may be required for the connection. ENWIN may choose to connect the Customer upon receipt of a properly executed Letter of Intent to Grant Easement.

A sample commercial Connection Agreement is available upon request.

**3. Permit for New or Modified Service** – ENWIN may require Customers to sign a permit for new or modified electrical service that requires ENWIN to invest up to \$10,000. This permit will define the terms and conditions that will apply to the provision of such services. ENWIN will connect the Customer upon:

- Execution by the Customer of the permit;
- Payment in full for any monies owing to ENWIN related to the connection or related to any other arrears of the Customer. At its option, ENWIN may choose to accept a Purchase Order or Letter of Credit from the Customer, provided the Customer would also be the account holder of the service;
- Receipt by ENWIN of notification of any inspection approvals or other approvals which may be required; and

- Registration by the Customer of any easements in favour of ENWIN, which may be required for the connection. ENWIN may choose to connect the Customer upon receipt of a properly executed Letter of Intent to Grant Easement.

**4. Embedded Generator Agreements** – These agreements are ones in which ENWIN and the Embedded Generator mutually agree on the standards, procedures and communications for the operation and maintenance of the Generation Facility. ENWIN will specify the operating procedures for ensuring the protection of their distribution system against any deviations from accepted electrical system standards. There are several agreements related to the connection and operation of generators attached to ENWIN's distribution grid.

**5. Operating Agreement** – This agreement is one in which ENWIN and the Customer define the standards, procedures and communications for the operation and maintenance of the connection facilities between ENWIN and the Customer.

**6. Easement Agreements** – See Section 2.1.6 – Easements, for a description of the terms of easement agreements with landowners. Easement Agreements will vary depending on the specific circumstances giving rise to the need for the easement and are available upon request.

**7. Temporary Service Agreement** – This agreement is for service provided to the Customer on a temporary basis. Temporary services are provided to the Customer at full cost of both installation and removal. Costs are not reduced by consideration of the revenue stream provided by the connection, as there is no guarantee of an on-going revenue stream from the Customer for a temporary service.

**8. Special Residential Agreement** – This agreement is for residential connections that have additional costs charged to the Customer. Examples are overhead-to-underground services, road crossing poles, second services, etc.

**9. Relocation of Facilities Agreement** – This agreement is used where a Customer is charged for the relocation of facilities.

**10. Multi-metering Agreement** – This agreement is used where a bulk metered Customer wishes to change to multi-metering or a multi-unit building is requesting service. This agreement outlines the conditions associated with provision of multi-metering.

**11. Joint Use Agreement** – This agreement is used to define the conditions under which ENWIN and Bell Canada allow use on each other's poles.

**12. Pole Licensing Agreement** - This agreement is used to define the conditions for attachment and use of the communication space on ENWIN poles.

**13. Subdivision Agreement** - This agreement outlines the terms and conditions for an owner of subdivision lands to be provided with electricity and street lighting services from the ENWIN distribution system.

**14. Sentinel Lighting Agreement** – This agreement outlines the terms and conditions upon which sentinel lighting services will be provided.

## 2.2 Disconnection

ENWIN reserves the right to disconnect service for reasons not limited to:

- Contravention of the laws of Canada or the Province of Ontario, including the Ontario Electrical Safety Code;
- A material adverse effect on the reliability and safety of ENWIN's distribution system;
- Imposition of an unsafe worker situation beyond normal risks inherent in the operation of ENWIN's distribution system;
- A material decrease in the efficiency of ENWIN's distribution system;
- A materially adverse effect on the quality of distribution services received by an existing connection;
- Inability of ENWIN to perform planned inspections and maintenance;
- Failure of the Customer to comply with a directive of ENWIN that ENWIN makes for purposes of meeting its Distribution Licence obligations;
- Overdue amounts payable to ENWIN including amounts payable relating to a security deposit;
- Failure of the Customer to open an account, including satisfying the documentation requirements of Section 2.4.1 in these Conditions of Service;
- Failure of the Customer to provide means of access to the site and/or meter room;
- Electrical disturbance propagation caused by Customer equipment that is not corrected in a timely fashion; or
- Any other conditions identified in these Conditions of Service.

ENWIN may disconnect the supply of electricity effective immediately and without notice in accordance with the following conditions, and as stated in Sections 2.2.1 and 2.2.2 in these Conditions of Service:

- Pursuant to a court order;
- For emergency or safety reasons;
- For system reliability reasons;
- The premises is implicated in the theft of power or other unauthorized use of energy;
- A Customer intentionally avoids bill payments by applying or re-applying for a new account under a different account-holder name, or otherwise acts fraudulently;
- A Customer who has been disconnected has reconnected service without ENWIN authorization; or

- Pursuant to an order of the Electrical Safety Authority.

### **2.2.1 Disconnection & Reconnection – Process and Charges**

Immediately following the due date, steps will be taken to collect the full amount of the electricity bill. ENWIN will provide an overdue notice and disconnection notice to the Customer in writing prior to any disconnection, as prescribed by applicable legislation, codes and regulations.

If provided by mail, a disconnection notice will be deemed to be received on the fifth calendar day after the date on which the notice was printed by ENWIN. At the request of a Residential Customer, ENWIN shall send a copy of any disconnection notice issued to the Customer for non-payment to a third party designated by the Customer for that purpose provided that the request is made no later than the last day of the applicable minimum notice period. As well, Residential Customers may at any time prior to disconnection, designate a third party to also receive any future notice of disconnection.

If the bill is still unpaid after the due date and after an overdue notice and disconnection notice has been delivered to the Customer, the service may be disconnected or restricted in accordance with applicable legislation, codes and regulations, and service may not be restored until payment satisfactory to ENWIN has been made. For clarity, ENWIN will not disconnect the supply of electricity to a property for non-payment during any disconnection bans prescribed by applicable legislation, codes and regulations.

Upon discovery that a hazardous condition or disturbance propagation (feedback) exists, ENWIN will notify the Customer to rectify the condition at once and, if necessary, provide a disconnection notice in writing. Except in cases of emergency, ENWIN will give the Customer seven (7) calendar days from the date they are deemed to have received the disconnection notice to make satisfactory arrangements to remedy the condition. If the Customer fails and/or refuses to do so, the service may be disconnected in accordance with applicable legislation, codes and regulations, and it may not be restored until satisfactory arrangements to remedy the condition have been made.

ENWIN will not be liable for any damage to the Customer's premises resulting from such discontinuance of service, except for physical damage to facilities arising directly from ENWIN's entry on the Customer's property. Any discontinuance or restriction of service does not relieve the Customer of the liability for arrears or other applicable charges for the balance of the term of contract.

Notwithstanding the above, where a residential Customer has provided ENWIN with documentation from a physician confirming that disconnection poses a risk of significant adverse effects on the physical health of the Customer, their spouse, a dependent family member or other person that regularly resides with the Customer, service shall not be disconnected for non-payment until 60 days from the date on which the disconnection notice is deemed to be received by the Customer.

When ENWIN receives a connection termination request from the Customer, it will disconnect and/or remove ENWIN's connection assets at the Customer's cost. When a Customer requests a disconnection and a reconnection of its supply of electricity, then the Customer may be required to pay a fair and reasonable charge based on cost recovery principles or pay any applicable fees in accordance with the Specific Service Charges contained in ENWIN's Tariff of Rates and Charges.

Where a service is disconnected by ENWIN for non-payment, ENWIN will reconnect the service within two (2) business days of the outstanding account balance being paid in full or the Customer entering into an arrears payment agreement. A reconnection charge may apply where the service has been disconnected for non-payment in accordance with regulatory codes issued by the OEB.

## **2.2.2 Unauthorized Energy Use**

Upon identification of possible unauthorized energy use, ENWIN may notify, as applicable, the Police, the Electrical Safety Authority, Measurement Canada, Retailers and any other entities deemed appropriate by ENWIN in its sole discretion.

Notwithstanding the provisions of Section 2.1.7 - Implied Contract, ENWIN reserves the right to disconnect the supply of electricity to a building or property in accordance with applicable legislation, codes and regulations where the building or property has or appears to have been used for unlawful purpose or criminal activity, including but not limited to fraud, energy diversion or theft of power.

The supply of electricity to the building or property may not be reconnected for the existing Customer until ENWIN receives full payment from the existing Customer of all reasonable costs and losses incurred by ENWIN arising from the unauthorized energy use, including costs of inspections, repair costs, commodity costs, delivery costs, regulatory costs, disconnection costs, and reconnection costs.

## **2.3 Conveyance of Electricity**

### **2.3.1 Limitations on the Guaranty of Supply**

ENWIN will endeavor to use reasonable diligence in providing a regular and uninterrupted supply of electricity, but it 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.

Therefore, Customers are responsible for obtaining back-up or standby facilities and/or protective equipment to ensure electricity supply, avoid damage to equipment and

minimize the effects of momentary interruptions as set out below in Section 2.3.3. That is particularly important if the Customer requires a higher degree of security than that of a normal electricity supply, including Customers with a three-phase supply, or their operations are intolerant to momentary power interruptions.

During an emergency and/or supply shortage, ENWIN may interrupt service to a Customer without notice to effect repairs or improvements on ENWIN's distribution system, to conduct work of an emergency nature, or to allow for work that would be unsafe to perform with a live electrical system. ENWIN may also interrupt its service to a Customer without notice to facilitate repairs to Customer-owned equipment if an unsafe or hazardous condition is found to exist or if the use of electricity by apparatus, appliances, or other equipment is found to be unsafe or potentially damaging to ENWIN or to the public.

To assist with distribution system outages or emergency response, ENWIN may require a Customer to provide ENWIN with emergency access to Customer-owned distribution equipment that normally is operated by ENWIN or to ENWIN-owned equipment on a Customer's property. ENWIN also has rights to access property under section 40 of the *Electricity Act, 1998* as amended.

## **2.3.2 Power Quality**

### *2.3.2.1 Power Quality Investigations*

Where a Customer provides evidence or data indicating that a power quality or an electromagnetic interference ("EMI") problem may be originating from ENWIN's distribution system, ENWIN will investigate the issue within a reasonable timeframe to identify the underlying cause. ENWIN's investigation may include a review of relevant power interruption data, trend analysis, and power quality monitoring at the main revenue meter or, if warranted, at the Customer's facility.

ENWIN will take appropriate mitigation measures if it determines that the cause resulting in the power quality concern:

1. Originates from the ENWIN distribution system;
2. Is deemed a system delivery issue; and
3. Industry standards are not met.

If ENWIN is unable to correct the problem without adversely affecting other Customers or the distribution system, then it is not obligated to make the corrections. ENWIN will apply appropriate industry standards and good utility practice as a guideline.

If, after the initial investigation, ENWIN determines that the power quality issues lie on the Customer's side of the demarcation point, and the Customer's equipment issue adversely

affects ENWIN's other Customers, then the Customer is responsible for correcting the issues.

If ENWIN determines the problem lies on the Customer side of the demarcation point, and the Customer issue does not adversely affect ENWIN's other Customers, then ENWIN will not continue or conduct any further investigation at the Customer's facility.

If the Customer is not in agreement with ENWIN's conclusion or the Customer wishes to do further investigation, then the Customer shall pay ENWIN for the full cost of any further investigation.

#### *2.3.2.2 Obligation to Assist in the Investigation*

If ENWIN has reason to believe the Customer's equipment is the source of power quality problems or unacceptable harmonics or voltage disturbances on ENWIN's distribution system, the Customer shall assist the investigation by:

- (a) Maintaining and providing ENWIN with a detailed log of exact times and dates of poor power quality;
- (b) Ensuring corrective measures such as filters and/or grounding are installed for non-linear loads connected to the distribution system;
- (c) Assisting ENWIN in determining whether the Customer's equipment may be a source of undesirable system disturbances including providing requested load information, data and access; and
- (d) Ceasing operation of the equipment deemed to be the cause of system disturbances until satisfactory remedial action has been taken.

ENWIN can provide Customers with a list of recommended vendors that are qualified to perform an independent investigation, and to supply and install corrective equipment at the Customer's facility. All independent investigations or any requirements for corrective equipment shall be the Customer's sole responsibility and expense.

#### *2.3.2.3 Notification for Interruptions*

As noted above, ENWIN may interrupt service to Customers without notice during emergencies and supply shortages. ENWIN may also need to interrupt a Customer's service to conduct work on or around its electrical system from time to time, including but not limited to allowing for tree trimming. In these cases, ENWIN endeavours to provide Customers notice of planned power interruptions whenever it is reasonable and practical to do so. However, the timing of interruptions may change without notice due to inclement weather or other unforeseen circumstances. ENWIN is not liable in any manner to affected Customers for failure to provide notice of planned power interruptions, or for any change to the schedule for planned power interruptions.

#### *2.3.2.4 Notification to Consumers on Life Support*

Customers with life support system are encouraged to inform ENWIN of their medical needs. These Customers are responsible for ensuring that the information they provide ENWIN is accurate and up-to-date and, if they require an uninterrupted source of power, they are responsible for obtaining back-up equipment. ENWIN will endeavor to notify registered life support Customers in person of a planned interruption but will not be liable in any manner for failure to do so.

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

In the event of a power interruption, the Customer should first ensure that the failure is not due to the operation of circuit breakers, fuses or other failures of Customer-owned equipment. If the Customer believes Customer-owned equipment has failed, ENWIN encourages the Customer to obtain the services of a qualified electrical contractor to carry out necessary repairs. If, on examination, it appears that the interruption is a result of loss of supply from ENWIN that is not part of a wider system outage, the Customer should report this condition promptly to ENWIN by calling 519-255-2727.

ENWIN operates 24 hours a day to provide emergency service to Customers. ENWIN will initiate restoration efforts as rapidly as practicable.

#### *2.3.2.6 Outage Reporting*

ENWIN monitors conditions on its distribution system and is normally able to determine when and where a power outage is occurring. For unplanned power outages or other emergency conditions, ENWIN will act promptly and diligently to correct the condition safely and quickly, having due regard for the safety and security of its crews. If a member of the public or Customer observes any emergency condition involving the ENWIN system (e.g. pole or wires down, fires, etc.), ENWIN strongly encourages the observation be reported to 911. Emergency authorities will then in turn notify ENWIN.

ENWIN may at its discretion issue a media release advising of the circumstances of a power outage including outage duration, number of Customers impacted, expected duration (when known) or other precautions concerning the conditions. ENWIN maintains a publicly available outage map with a social media broadcast component. ENWIN will endeavor to ensure that information available on the outage map and social media is accurate. However, ENWIN does not assume legal responsibility for the use and accuracy of the outage map information.

### **2.3.3 Electrical Disturbances**

As noted above, ENWIN does not guarantee uninterrupted power, and it does not warrant that its supply will be free from voltage swell, sags, spikes and harmonics. The supply of electricity may be interrupted on a planned or unplanned basis, and ENWIN will not be liable for any failure to supply electricity or voltages within standard levels for any reason including a Force Majeure event.

Voltage fluctuations and other disturbances can cause flickering of lights and other difficulties for Customers connected to ENWIN's distribution system. For example, some Customers may have equipment that could be damaged by momentary power interruptions or small voltage sags or crests.

Customers who may require an uninterrupted source of power or a supply completely free from fluctuation and disturbance must provide their own power conditioning equipment and fast acting alternate sources of power that are effective for these purposes.

If the Customer installs any such equipment or alternate sources of power, it must comply with the latest version of the IEEE Standard 519 including the voltage distortion limits set out in Table 1 as well as the current distortion limits for systems rated 120 V through 29 kV set out at Table 2. Specifically, the limit on individual harmonic distortion should be maintained at or below 3%, while the limit on total harmonic distortion should be maintained at or below 5%.

Customers must ensure that their equipment does not cause disturbances such as voltage sags and spikes that might interfere with the operation of adjacent Customer equipment. Equipment that may cause such disturbances includes large motors, welders and variable speed drives, etc. In planning the installation of such equipment, the Customer must consult with ENWIN.

In particular, Customers shall ensure that their motors and self-contained air conditioning units do not exceed the following starting current limitations:

- 240 V, 1-phase – starting current limitation is 75 A
- 120 V, 1-phase – starting current limitation is 40 A
- Operating power factors shall not be less than:
  - 0.75 for motors rated 1/3 Hp
  - 0.80 for motors rated 1/2 Hp
  - 0.85 for motors rated 3/4 Hp

The limitations are set so that the starting current does not affect other Customers. Higher starting currents may adversely affect other electrical equipment in the Customer's own premises.

Customers shall request that ENWIN review the starting current for all three-phase motors in excess of 100 Hp. ENWIN may specify conditions to which the Customer shall comply for the starting of such motors to ensure no adverse effect on power quality. An approval by ENWIN to connect such motors without starting equipment may be changed at any

time and does not exempt a Customer from meeting the obligations of these Conditions of Service should a power quality problem be experienced by other Customers.

Non-linear loads, inverter-based generators or energy storage devices are also known to be capable of imposing voltage and current harmonic distortions on the Customer's electrical distribution system and ENWIN's distribution system.

If an undesirable system disturbance is being caused by the Customer's equipment, or distortions exist in excess of the limits outlined the latest edition of IEEE Standard 519, the Customer will implement any necessary remedial measures such as installing proper filters and/or improving grounding connections. The Customer will be required to cease operation of the equipment until remedial action has been taken by the Customer, at the Customer's expense. If the Customer does not take such action within a reasonable time, ENWIN shall disconnect the supply of electricity to the property to mitigate any adverse effects on other Customers.

### **2.3.4 Standard Voltage Offerings**

#### *2.3.4.1 Primary Voltage*

The primary voltage system for ENWIN is a 27.6/16 kV grounded wye, three-phase, four-wire system.

#### *2.3.4.2 Supply Voltage*

ENWIN provides the following secondary voltages:

- 120V            1 Phase        2 Wire (Streetlights only)
- 120/240 V      1 Phase        3 Wire
- 120/208 V      3 Phase        4 Wire Y-grounded
- 347/600 V      3 Phase        4 Wire Y-grounded
- 277/480 V      3 Phase        4 Wire Y-grounded\*

- \*Customers may request a non-standard 277/480 V supply, which ENWIN may provide at its discretion and subject to certain limitations that must be agreed upon.

Customers shall not be provided with both a 120/240 V single-phase service and a 120/208 V three-phase service. However, a 120/240 V single-phase service will be allowed with a 347/600 V three-phase service. The range of service available to a Customer may be limited depending upon the distribution system which ENWIN has in proximity to a Customer. The table below provides a guideline as to availability of service and capacity of transformation available from ENWIN.

Voltage System	3-Ø Secondary Voltage	Available 3-Ø Supply
27.6/16.0 kV	347/600 V	up to 4000 kVA
27.6/16.0 kV	120/208 V	up to 1500 kVA

When the Customer requires voltages other than at the available supply voltage, or when demands by a single occupant exceed the limits indicated above, the Customer shall consult with ENWIN. ENWIN may advise the Customer of any special conditions and requirements to obtain non-standard services. However, ENWIN is under no obligations to provide any non-standard services. Customers may supply their own transformation where non-standard voltages or larger capacity supplies are required.

#### 2.3.4.3 Multiple Connections to Main Distribution System

Customers will generally be connected to only one point on the primary distribution system. Customers wishing to be provided a second or standby connection to another point on the primary distribution system may inquire of ENWIN as to the availability, costs and any restrictions on the use of such a connection.

However, ENWIN may determine, in its sole discretion and based on the services requested by the Customer, that the customer requires a second or standby connection to another point on the primary distribution system. The Customer will be responsible for costs associated with any such connection.

#### 2.3.5 Voltage Guidelines

This section outlines what voltages ENWIN's Customers can reasonably expect, with reference to Canadian Standards Association ("CSA") Standard CAN3-235 current edition.

ENWIN maintains service voltage at the Customer's service entrance within the voltage variation limits shown in the table below:

Nominal Voltage	Voltage Variation Limits			
	Extreme Operating Conditions			
	Normal Operating			
1 Phase - 120/240V	106/212	110/220	125/250	127/254
3 Phase - 120/208V	110/190	112/194	125/216	127/220
3 Phase - 347/600V	306/530	318/550	360/625	367/635

Where voltages lie outside the indicated limits for Normal Operating Conditions but within the indicated limits for Extreme Operating Conditions, improvement or corrective action will be taken by ENWIN on a planned or programmed basis, but not necessarily on an emergency basis.

Where voltages lie outside the indicated limits for Extreme Operating Conditions, improvement or corrective action may be taken on an emergency basis depending on several factors, including but not limited to the location and nature of load or circuit, the extent to which voltage limits are exceeded and the duration of time for which the limits have been exceeded.

ENWIN shall take the appropriate diligence to solve the problem where voltages exceed normal operating limits, but it is not responsible for variations in voltage related to external factors. External factors include but are not limited to those factors that necessitate operating contingencies as well as exceptionally high loads and low voltage supply from the transmitter. ENWIN shall not be liable for any delay or failure in the performance of any of its obligations under these Conditions of Service due to any events of Force Majeure.

### **2.3.6 Emergency Backup Generation Facilities**

This section applies to Customers planning to install or have installed emergency back-up generators to supply their loads during times when grid power is not available. This does not apply to customers planning to install generators to connect to the grid, either on the line side or load side of their meters, and to operate in parallel with the grid on a continuous basis lasting more than 1/10 of one second.

Emergency backup generation may be installed by Customers for backup of load when utility power supply is not available. A Customer with portable or permanently connected emergency backup generation shall comply with all applicable criteria of the Ontario Electrical Safety Code and in particular, shall ensure that its Emergency Backup Generation Facility does not back feed into ENWIN's distribution system or back feed through the revenue meter. This would cause unexpected and potentially fatal voltages to be present on the equipment at the time when ENWIN staff may be working on the system to restore power.

A Customer with an Emergency Backup Generation Facility in "Open-Transition" mode (Break-then-Make) shall further ensure that its facility does not parallel with, nor adversely affect ENWIN's distribution system.

Customers who consider installing a "Closed-Transition" (Make-then-Break) switch shall apply to ENWIN for approval for such a connection and shall submit documentation that satisfies ENWIN's technical requirements. Customers shall obtain written authorization from ENWIN prior to commissioning the switch in Closed-Transition mode. Closed-Transition switches must not operate the generator in parallel with ENWIN's distribution system for longer than 100 milliseconds under any circumstances.

Customers with a permanently connected Emergency Backup Generation Facility operating in parallel shall notify ENWIN regarding the presence of such equipment and

shall enter into a Connection Agreement with ENWIN outlining the conditions associated with that type of connection.

Residential and small commercial customers should note that ENWIN does not permit meter socket plug-in emergency back-up transfer devices.

## **2.3.7 Metering**

### *2.3.7.1 General*

#### **Residential/Commercial/Industrial**

ENWIN shall typically install metering equipment at the Customer supply voltage. The Customer shall provide a convenient and safe location, approved by ENWIN, for the installation of meters, meter sockets, wires, and ancillary equipment. The meter shall be located as near as possible to the service entrance box. Meters for new or upgraded Residential Services shall be mounted outdoors on a meter socket approved by ENWIN.

No person(s), except those authorized by ENWIN, may remove, connect, interrogate, or otherwise interfere with meters, wires, or ancillary equipment. The Customer shall be responsible for the care and safekeeping of ENWIN meters, wires, and ancillary equipment on the Customer's premises. If any ENWIN equipment installed on Customer premises is damaged, destroyed, or lost other than by ordinary wear and tear, storms or lightning, the Customer shall be liable to pay to ENWIN the value of such equipment, or at the option of ENWIN, the cost of repairing the same.

The Customer shall supply all metering equipment including sockets, metering cabinets, enclosures, electrical panels, mounting boards, conduits, wiring devices, fittings, adequate space, telephone lines and/or 120 Volt AC supply for the metering and communications equipment, where required.

All Customer-owned metering equipment (meter socket, metering cabinet, conduits, etc.) shall be maintained by the Customer. Any repairs, replacements or costs associated with maintaining the equipment to ENWIN standards shall be at the Customer's expense.

The service to a house will not be energized until the outside finish around the meter has been completed. However, if an exception to this requirement is permitted, in ENWIN's sole discretion, then the person(s) constructing the house shall be responsible for ensuring that the meter is suitably protected while work is being carried out on the exterior wall adjacent to the meter. The Customer will be entirely responsible for all costs for materials and labour for repairing or replacing a damaged meter.

In cases of multiple metering installations (both residential and commercial), Customers must meet the requirements set out in Section 2.3.7.1.1 Metering Requirements for Multi-Unit Buildings and 2.3.7.1.2 General Service - Multi Metered Buildings.

Should ENWIN require the Customer to modify or relocate the existing service or the connection point, the Customer shall be responsible for the costs associated with the Customer-owned equipment modification or relocations.

The Customer must permit ENWIN to install metering equipment in a location that is easily accessible to ENWIN staff, and shall be subject to satisfactory environmental conditions, including:

- a) Maintain a safe and adequate working space of 914mm (36 inches) in front of equipment and 460mm (18 inches) beside equipment;
- b) Maintain a minimum ceiling height no less than 2140mm (84 inches);
- c) Maintain an unobstructed working space in front of the meter and service panel, free from, or protected against, the adverse effects of moving machinery, vibration, dust, moisture or fumes;
- d) Meters shall not be located in a bathroom, stairway, behind an oil tank, directly under a water or steam pipe or within 460mm (18 inches) of water, gas, or steam pipes; and
- e) Meters shall not be located in an area subjected to dripping, splashing or spraying water and any such conditions must be rectified by the Customer or the Customer's service may be disconnected until the condition has been rectified.

Where ENWIN deems meters to be in a dirty or hazardous location, the Customer shall provide a meter cabinet or protective housing in accordance with ENWIN and Ontario Electrical Safety Code standards, or another location for the meter.

Any compartments, metering cabinets, boxes, meter sockets, or other workspace provided for the installation of ENWIN metering equipment shall be for the exclusive use of ENWIN. No equipment, other than that provided and installed by ENWIN, may be installed in any part of the meter socket or ENWIN metering workspace unless otherwise authorized by ENWIN.

The Customer, or the Customer's Authorized Representative, shall consult with ENWIN concerning the availability of supply, the supply voltage, service location, metering, and any other details. One set of electrical drawings including plot plan, service and connected load details are required in order that the Customer's needs can be properly met. These requirements are separate from, and in addition to, those of the Ontario Electrical Safety Code.

The Electrical Safety Authority is the Provincial authority, through which application for inspection and Connection Authorization for electrical service shall be provided. Services shall only be connected upon receipt of Connection Authorization from the Electrical Safety Authority.

All permanent services for dwellings shall have a minimum service of 100 A. Service entrance requirements for service capacities of more than 200 A shall be determined upon application to the ENWIN Technical Services department.

It is a criminal offence to tamper in any way with the meter, meter seals, or meter socket.

## **Communications**

For existing Customers with metering read via a phone line, it is the responsibility of the Customer to provide ENWIN with a Plain Old Telephone Service ("POTS") phone line communication to the meter and to ensure ENWIN has an uninterrupted connectivity to/from the meter. The Customer shall be responsible for the costs associated with maintaining the POTS phone line.

Customers with metering read via wireless communication must permit ENWIN to install metering in a location accessible by the radio frequency ("RF") signals used for communication with ENWIN's advanced metering infrastructure ("AMI") or the cellular system ENWIN uses to read interval meters. Where the Customer's metering is not accessible by this meter reading signal, the Customer shall be responsible for ENWIN's costs to relocate the meters to another location or to provide an alternative means satisfactory to ENWIN of reading the meters remotely. The Customer shall be responsible for the applicable costs associated with the wireless communication as specified in ENWIN's Tariff of Rates and Charges.

Customers are prohibited from restricting ENWIN's access to these meter reading signals and are liable for any costs incurred by ENWIN to investigate, notify, and remediate any such occurrences, including any on-going costs to manually read the meter.

### **120V, Single Phase, 2 Wire (see Appendix 2, Table 5)**

For 120V service requests approved by ENWIN up to and including 200A, a four (4) jaw ENWIN approved meter socket installed on the line side of a disconnect switch supplying each individual service is required. ENWIN will provide a form 1s electric meter rated for 120V, 200A with integrated communication to be read remotely. These services are limited to outdoor commercial infrastructure installations, such as parking lot lighting services, billboards, pole services, and temporary services.

### **120/240V, Single Phase, 3 Wire (see Appendix 2, Tables 1 - 5)**

Residential services up to and including 200A require a four (4) jaw ENWIN approved meter socket installed on the line side of a disconnect switch supplying each individual service. ENWIN will provide a form 2s electric meter rated for 240V, 200A with integrated communication to be read remotely.

Residential services rated for 400A, 120/240V require an ENWIN-approved, five (5) jaw, transformer rated meter socket, located outdoors, on the line side of the main disconnect.

ENWIN will provide a 3-wire current transformer and a form 3s meter rated for 240V, 20A with integrated communication to be read remotely.

Commercial services up to and including 200A require a four (4) jaw ENWIN approved meter socket installed on the line side of a disconnect switch supplying each individual service. Commercial meters are typically located indoors. Requests to install commercial meters outdoors will be considered on a case-by-case basis. ENWIN will provide a form 2s electric meter rated for 240V, 200A with integrated communication to be read remotely.

Commercial services over 200A require a metering cabinet installed on the load side of the disconnect switch supplying each individual service that will house the meter and any other required metering equipment. ENWIN will provide the current transformer and the secondary wiring as well as a form 3s electric meter rated for 240V, 20A with integrated or external communications to be read remotely.

Where load changes are unlikely, gang meters may be allowed before a main switch at the discretion of ENWIN. The total of the ratings of the overcurrent devices (maximum allowable) must not exceed the rating of the incoming supply conductors. This gang meter socket is not to be rated more than 400A at 120/240V.

#### **208Y/120V, Three Phase, 4 Wire (see Appendix 2, Table 6)**

Services up to and including 200A require a seven (7) jaw meter socket installed on the load side of the disconnect switch supplying each individual service. ENWIN will provide a form 16s electric meter rated for 120/208V, 200A with integrated communication to be read remotely.

Services over 200A require a metering cabinet installed on the load side of the disconnect switch supplying each individual service that will house the meter, the instrument transformers, and any other required metering equipment. ENWIN will provide the instrument transformers and the secondary wiring as well as a form 9s electric meter rated for 120V, 20A with integrated or external communications to be read remotely.

#### **600Y/347V, Three Phase, 4 Wire (see Appendix 2, Table 7)**

Services up to and including 200A require a seven (7) jaw meter socket installed on the load side of the disconnect switch supplying each individual service. ENWIN will provide a form 16s electric meter rated for 347/600V, 200A with integrated communication to be read remotely.

Services over 200A require a metering cabinet installed on the load side of the disconnect switch supplying each individual service that will house the meter, the instrument transformers, and any other required metering equipment. ENWIN will provide the instrument transformers and the secondary wiring as well as a form 9s electric meter rated for 120V, 20A with integrated or external communications to be read remotely.

ENWIN will not supply three (3) wire services (two (2) phases and neutral) or two (2) wire services (one (1) phase and neutral) from the 600Y/347V, three (3) phase, four (4) wire system.

### **208Y/120V, Three Phase, 3 Wire (Network) (see Appendix 2, Table 8)**

For customer equipment supplied with 208Y/120V, up to and including 200A, and consisting of meter sockets having only two (2) phases and a neutral, a five (5) jaw meter socket is required with the fifth (5<sup>th</sup>) jaw installed in the nine (9) o'clock position. ENWIN will provide a form 12s electric meter rated for 120V, 200A with integrated communication to be read remotely.

### **600V, Three Phase, 3 Wire Delta (see Appendix 2, Table 9)**

ENWIN is no longer able to provide form 12s electric meters rated for 600V, 200A. As meters of this type approach expiry, Customers shall be required, at the cost of the Customer, to upgrade the service to accommodate a meter type ENWIN has available.

Services over 200A require a metering cabinet installed on the load side of the disconnect switch supplying each individual service that will house the meter, the instrument transformers, and any other required metering equipment. ENWIN will provide the instrument transformers and the secondary wiring as well as a form 5s electric meter rated for 120V, 20A with integrated or external communications to be read remotely.

When a 600V, three (3) phase, three (3) wire service is supplied from the 600Y/347V, three (3) phase, four (4) wire system, it must be metered as a three (3) phase, four (4) wire service with the neutral brought out. A full size neutral shall be installed from the transformer to the metering location.

### **600Y/347V, Three Phase, 3 Wire (Network) (see Appendix 2, Table 9)**

For Customer equipment supplied with 600Y/347V, up to and including 200A, and consisting of meter sockets having two (2) phases and a neutral, a five (5) jaw meter socket is required with the fifth (5<sup>th</sup>) jaw installed in the nine (9) o'clock position. ENWIN will provide a form 12s electric meter rated for 347/600V, 200A with integrated communication to be read remotely.

### **Customer-Owned Stations**

Customers supplying their own transformation may be primary or secondary metered. The location of the metering equipment, type, and style used shall be determined by ENWIN at its sole discretion. Due to the varied characteristics of the Customers' facilities at each location where primary metering is required, each installation shall be determined on a case-by-case basis.

### **Generators/Embedded Distributors**

Generators and Embedded Distributors shall be required to comply with the metering requirements for generation facilities set out in the OEB's Distribution System Code.

### *2.3.7.1.1 Metering Requirements for Multi-Unit Buildings*

#### **General**

Multi-Unit buildings are those premises, which are intended to be occupied by more than one tenant. Should the utilization voltage for an apartment building be 208Y/120V, the Customer and the Customer's engineer shall note that all stoves, heaters, motors, and other such equipment must be rated for this voltage to ensure efficient operation.

Developers of new multi-unit residential rental buildings and new and existing condominiums (collectively, "MURBs"), or boards of directors of condominiums, or authorized persons in charge of any other applicable class of unit under Ontario Regulation 389/10, may choose to have ENWIN install unit smart metering (each unit would have a ENWIN-owned meter and require a separate ENWIN account), or to have ENWIN install a bulk meter for the purpose of enabling unit sub-metering by a licensed unit sub-meter provider instead of ENWIN.

The Customer shall ensure that meter centres are permanently and properly identified and connected for metering and operation purposes. It is necessary to permanently identify each unit clearly and accurately with respect to their corresponding meter socket, disconnect switch, and electrical panel. In the case of remote disconnects in a meter centre or similar enclosure, the switch handle and compartment must be identified.

Customers are prohibited from tampering with meters. If the Customer finds deficiencies, such as mislabeling/cross wiring situations, they must immediately notify ENWIN and correct the deficiencies. If the Customer does not take such immediate action, ENWIN may disconnect the supply of electricity to the Customer. Until the issue is addressed, it may not be possible for ENWIN to determine the consumption to attribute to each unit, in which case the responsibility for charges will continue to reside with the existing account-holder. Multi-unit building owners should verify that meter-to-unit connections are correct to ensure accurate billing of their tenants and must notify ENWIN immediately if unit numbering is changed.

The Customer must notify ENWIN prior to combining or splitting unit metering or changing unit numbers, as failure to do so may result in incorrect billing, and the Customer or person(s) or entity in charge of the multi-unit building may be required to pay any costs ENWIN incurs to investigate and correct billing errors, if applicable. Where two or more individually metered commercial or residential units are combined, metering shall be consolidated into a single metering point and billed under a single account.

#### **Unit Smart Metering**

Upon the request of a MURB developer, owner or a condominium board of directors, ENWIN will install unit smart metering that meets the functional specification of Ontario Regulation 425/06 – Criteria and Requirements for Meters and Metering Equipment, Systems and Technology.

In that case, each separate residential and commercial unit, as well as common areas, will become direct individual Customers of ENWIN, with the common area or shared services accounts held by the developer, owner, condominium corporation or the landlord as appropriate. Common or shared services typically include lighting of all common areas shared by the tenants, or unit owners, and common services such as heating, air conditioning, water heating, elevators, and common laundry facilities. In such cases, consumption for all common areas will be separately metered.

Customers may request to have multi-occupancy residential sites equipped with individual ENWIN-owned metering. ENWIN will consider relevant factors, including the building design and equipment availability, and accommodate the Customer request where practicable. However, the Customer may be responsible for all additional costs for the metering.

### **Bulk Metering**

If the developer, owner or condominium board of directors plans to make their own sub-metering arrangements or build electricity costs into rental fees, ENWIN may provide bulk metering. Bulk metering is typically found in low and high-rise apartment buildings, condominiums, offices, or combinations thereof.

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

The Customer wishing to have utility bulk metered multi-occupancy sites equipped with Customer owned 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 with Measurement Canada and ensure that all regulatory requirements are met.

#### ***2.3.7.1.2 General Service - Multi Metered Buildings***

Multi-occupancy buildings are those premises, which shall be occupied by more than one tenant and shall be multi-metered. Buildings in this classification are typically “industrial

plazas", apartment buildings and shopping centres. The following conditions of supply apply to such buildings:

- a) The supply shall be either single or three phase, at a voltage to be determined in consultation with the ENWIN Technical Services department. See also 2.3.4.2 - Supply Voltage.
- b) The Customer shall supply and maintain in common area(s), meter room(s) of sufficient size to accommodate the service entrance and meter requirements of all tenants and provide safe and clear working space as per subrule e) and Section 2.3.7.1 Metering - General, Residential/ Commercial/ Industrial.
- c) The meter room shall be separate from, but in close proximity to the supply source (i.e., transformer vault or pad installation), and be located so as to provide either direct access from the outside, a key or passcode to access the meters within the building located in a common area or contact information to an individual who has access 24 hours per day, seven (7) days per week. Access to the meter room through a tenant's unit is not acceptable. To permit meter reading and maintain electric supply, the meter room should be readily accessible at all hours to persons authorized by ENWIN. ENWIN may install a sticker to mark the door for ready identification.
- d) The meter room shall have a minimum ceiling clearance height of 2140mm (84 inches) and be provided with adequate illumination and a 120 V convenience outlet.
- e) The Customer shall supply and install a locking arrangement on the electrical room door. Keys shall be forwarded to the ENWIN Metering Department prior to service being energized. ENWIN shall keep all Customer keys in a secure and controlled area.
- f) The electrical room shall not be used for any type of storage nor contain, equipment unrelated to the electrical installation.
  - i. A copy of the grouped metering layout plan shall be forwarded to ENWIN for review prior to construction. Prior to energization the Customer shall identify each Customer-metered service by address and/or unit number approved by the municipality in a permanent and legible manner. The identification shall apply to all units, main switches, breakers and all metering cabinets and/or meter sockets that are not immediately adjacent to the switch or breaker.
  - ii. A floor plan showing the location of the units in relation to the electrical room shall be posted in the electrical room and a copy submitted to ENWIN. The drawings shall be revised within five days of any change to the floor plan.
  - iii. It is the responsibility of the building owner to ensure that the meters are permanently and correctly identified for the service they supply.

The building owner may be liable for any uncollectable consumption charges associated with incorrect service identification.

g) The operation of a Customer main switch shall not affect the supply to any other Customer or unit.

#### *2.3.7.1.3 Main Switch and Meter Sockets*

The Customer's main switch immediately preceding the meter shall be installed so that the top of the switch is no higher than 1.83 m and that the bottom of the switch is no lower than 1.0 m from the finished floor and shall permit the sealing and padlocking of the handle in the "open" position and the cover or door in the closed position.

Meter sockets for use on 120/240V services whether for residential or commercial accounts shall be installed on the line side of the Customer's main switch and be typically located outdoors.

Meter sockets for use on 208Y/120V and 600Y/347V services whether for residential, commercial, or industrial accounts shall be installed on the load side of the Customer's main switch and be typically located indoors.

The Customer is required to supply and install a CSA approved meter socket for the use of ENWIN self-contained socket meters for the main switch ratings and supply voltages listed in Section 5, Appendix 2, Tables 1-10 of these Conditions of Service.

For services over 200A, the Customer is required to supply and install a meter cabinet to contain ENWIN metering equipment for the main switch ratings and supply voltages listed in Section 5, Appendix 2, Tables 1-8 of these Conditions of Service.

Meter centres installed for individual metering applications must meet the requirements specified in Section 5, Appendix 2, Tables 2-5 of these Conditions of Service.

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 at all unit entrances, service switches, circuit breakers, meter cabinets, and meter sockets. The Customer shall notify ENWIN within five (5) business days of any change in address or unit number including consolidation of units and splitting of units.

The Customer shall install the meter cabinet to provide acceptable Line/Load/Door locations as per Section 5, Appendix 4 of these Conditions of Service.

Drawings for proposed meter centres for individual metering applications in multi-metered buildings must be submitted to ENWIN for approval before construction begins.

#### *2.3.7.1.4 General Service - Service Main Limitations*

The metering provision and arrangement for service mains in excess of 200 A shall be submitted to ENWIN for approval before building construction begins. Additional standards and requirements for services metered above 600 V can be made available upon request.

a) Service Main Limitations/Permissible Maximum Demand

- The limit of single phase supply is as follows:
  - ENWIN shall supply 120/240 V, single-phase up to 167 KVA demand load.
  - Services in excess of the above shall be considered upon application to the ENWIN Technical Services department.

b) Residential Services Greater Than 200 A

The Customer shall supply and install an approved outdoor transformer-rated meter socket, on the line side of the main disconnect, to contain ENWIN metering equipment, as per the Supply Voltages listed in Section 5, Appendix 2, Tables 1 & 2 of this Conditions of Service.

*2.3.7.1.5 General Service - Special Enclosures*

Specially constructed outdoor meter entrance enclosures shall be designed in consultation with ENWIN and shall be approved by ENWIN prior to construction of the enclosure.

Outdoor meter cabinets must meet a minimum National Electrical Manufacturers Association ("NEMA") 3R rating, ensuring protection against rain and sleet while allowing adequate ventilation. All cabinets must include provision for an ENWIN padlock. It is the responsibility of the Customer and/or their contractor, in consultation with the ENWIN Metering Department, to ensure the selected cabinet has sufficient depth to accommodate all required equipment. This includes, but is not limited to the meter socket, hydro meter, backplate, and meter socket adapter (if needed for cellular communication).

*2.3.7.1.6 Meter Cables*

The size/gauge and number of conductors per phase is limited according to the type and rating of the current transformers chosen for the specific metering installation. Always consult with ENWIN before proceeding with the installation of electrical equipment. Mineral insulated, solid, or hard drawn wire conductors are not acceptable.

The minimum length of cable looped inside the meter cabinet for bar-type current transformers shall be 1m (39 inches). This cable must be continuous i.e. it must not be cut. Neutral conductors shall run straight through the cabinet, tight to one side, without a loop or slack.

For all bar-type CT connections with load estimates of 400A or less, conductors no larger than 300 KCMIL shall be used, with a maximum of two conductors per phase.

For all bar-type CT connections with load estimates greater than 400A, wires up to and including 500 KCMIL may be used, with a maximum of two conductors per phase.

If more than two conductors per phase, or conductors larger than otherwise permitted, are required, the Customer or their contractor should contact ENWIN before proceeding to discuss possible alternative solutions. This will be considered a deviation from ENWIN's Standards which will require approval before permission is granted. Each situation will be reviewed on a case-by-case basis. Solutions may include the use of window-type CTs. If window-type CTs must be used, they shall be mounted on the backplate and installed in the cabinet by ENWIN before Customer's conductors are run.

#### *2.3.7.1.7 Barriers*

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

#### *2.3.7.1.8 Cabinet Doors*

Side-hinged doors shall be installed over all live electrical equipment where ENWIN personnel may be required to work (i.e. unmetered sections of switchgear, metering compartments, meter cabinets and enclosures). These hinged doors shall have provision for sealing and padlocking. All outer-hinged doors shall open no less than 135°. All inner-hinged doors shall open to a full 90°.

#### *2.3.7.1.9 Auxiliary Connections*

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

#### *2.3.7.1.10 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 and in accordance with ENWIN's Conditions of Service Section 2.3.7.1 Metering - General, Residential/ Commercial/ Industrial. The Customer shall ensure that the meter is accessible to ENWIN at all times for reading and maintenance and shall not be blocked by any future fence or other construction.

### *2.3.7.2 Instrument Transformer Cabinets*

Where instrument transformers are incorporated in low voltage switchgear, the size of the chamber and number of instrument transformers shall be determined in consultation with ENWIN's Metering department. A separate 508 mm x 762 mm x 254 mm (20 inches x 30 inches x 10 inches) meter cabinet must be supplied and installed by the Customer, located to the satisfaction of ENWIN and as close as possible to the instrument transformer compartment.

The cabinet and the compartment will be connected by an empty 1 ¼ inch rigid steel conduit, the length of which shall not exceed 30 m (100 ft.), and which shall include a maximum of three 90° degree bends. The conduit will be provided for the exclusive use of ENWIN. No fittings with removable covers are permitted.

The meter cabinet shall be bonded in accordance with the Ontario Electrical Safety Code. The Customer shall install a strong nylon or polyrope pull line in the conduit, with an excess of 1500 mm (60 inches) loop left at each end.

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

Where instrument transformers are incorporated in high voltage switchgear (greater than 750 V), ENWIN will issue specific metering requirements.

### *2.3.7.2.1 Meter Sockets for Underground Services*

#### **Underground Services to Row Housing and Residential Subdivisions**

For the purpose of this specification, row housing consists of separately serviced and metered dwelling units with individual outside entrances.

The Customer will be responsible for installing the meter socket and/or ensuring that the meter socket conforms with ENWIN standards. In particular, underground services require a minimum 200 amp rated heavy duty stud style, four (4) jaw meter socket with the sealing ring installed outdoors. Each individual unit shall have its own meter socket.

All service locations shall be approved by ENWIN, and services will conform to the Offers provided for the subdivision.

#### **Underground Services to Individual Residences**

ENWIN shall supply and install all materials to provide service from its existing supply lines to the line side of the meter socket to be located on the building.

The Customer shall obtain ENWIN approval for the service entrance and meter socket location prior to installation. The meter socket shall be supplied and installed by the Customer or the Customer's Authorized Representative. Normal meter socket installation is 3 m (120 inches) from the front of the building and 1730 mm  $\pm$  100 mm (68 inches  $\pm$  4 inches) from the finished grade to the centre of the meter socket.

ENWIN shall make all meter socket line side connections, and the Customer shall make the load side connections.

The final layout and arrangements of components must be approved by ENWIN prior to fabrication of equipment and coincide with the Section 5, Appendix 2 Tables of these Conditions of Service.

#### *2.3.7.3 Interval Metering*

In accordance with the OEB Distribution System Code, a MIST meter will be installed for all new or upgraded services where the peak demand is forecast by ENWIN to have a monthly average peak demand during a calendar year of over 50 kW, or for any Customer wishing to participate in the spot market pass-through pricing.

With respect to accessing interval data from MIST meters:

- a) Direct access – the Customer can elect to access the MIST meter data directly using Customer-purchased software. ENWIN shall provide the information required to access and use the meter data;
- b) Web access provided by ENWIN – when available, the Customers shall have access to their own MIST meter data on the Internet using their own account specific password;
- c) Information provided by ENWIN – Customers may request interval data from their MIST meter to be forwarded by ENWIN or its Authorized Representative. The Customer may be assessed the cost of providing the data in this manner on an actual cost, time and materials basis or a pass-through of third-party costs.

#### *2.3.7.4 Meter Reading*

ENWIN or its agents shall have the right to read any of ENWIN's electricity meters on the Customer's premises. All ENWIN metering equipment located on the Customer's premises is in the care and at the risk of the Customer and if destroyed or damaged, other than by normal usage, the Customer will pay for the cost of repair or replacement.

ENWIN will read its meters on a regular cycle called a meter reading cycle. The meter readings are transferred to the billing system and Customers are billed on a cycle, which parallels the meter reading cycle. ENWIN, in its sole discretion, may alter its meter reading cycles from time to time as new areas are developed and to maintain efficiencies. These changes will in turn affect the Customer's billing cycle one time and may make it shorter, in which case bills may be lower because of the shorter period of consumption, or longer, in which case bills may be higher because of the longer period of consumption.

Where a Customer repeatedly does not arrange for ENWIN to have access to the meters or does not keep those arrangements that have been made, that Customer will be billed for ENWIN time to attend the premises and may be provided a notice of disconnection and may have service disconnected pending the Customer providing access to the meters.

If a meter reading cannot be obtained, the Customer may be billed demand based on the larger of the last demand reading, the largest historical demand for the account for the period in question or the demand reading determined on the next actual reading. The Customer may be billed energy based on the larger of an estimated energy for electricity used since the last meter reading based on historical energy consumption for the account or the energy reading determined on the next actual reading.

#### *2.3.7.5 Final Meter Reading*

When a service is no longer required or the Customer is switching energy providers, the Customer shall provide a minimum of two (2) business days' notice of the date the service is to be discontinued so that ENWIN can obtain a final meter reading as close as possible to the final reading date. The Customer shall provide access to ENWIN or its agents for this purpose. If a final meter reading is not obtained, the Customer shall pay a sum based on an estimated demand and/or energy for electricity used since the last meter reading, as determined by ENWIN.

Where a Customer has requested discontinuation of the account and no other Customer has set up an account at a premises, then ENWIN may disconnect the electric service to that premises without further notice. Landlords wishing to be notified whenever service is discontinued to a premises owned by them may register with ENWIN to have the account revert to the landlord, excluding any debt of the tenant. In these cases, there shall be no interruption of service to the premises.

#### *2.3.7.6 Faulty Registration of Meters*

Metering electricity usage for the purpose of billing is governed by the federal *Electricity and Gas Inspection Act* (the "Act") and associated Regulations, under the jurisdiction of Measurement Canada. It is ENWIN policy to use only meters which comply with the accuracy specifications established by the regulations under the above Act.

In the event of incorrect electricity usage registration, including no registration, ENWIN will estimate the amount of the electricity usage using the best information available. This would include the use of a correction factor or a Customer's past consumption history. In some cases, such as a new Customer, it may be necessary to wait for a consumption history to occur before an estimate of unregistered or incompletely registered consumption may be made.

If the incorrect billing is due to reasons other than the accuracy of the meter, such as incorrect meter connection, incorrect connection of auxiliary metering equipment, incorrect meter multiplier used in the bill calculation, or incorrect application of a rate, the billing correction will apply for the duration of the error or as prescribed by the governing authority including the Retail Settlement Code, the *Act* and the *Limitations Act, 2000*.

If the incorrect billing is due to an inaccuracy of the meter, in excess of that permitted by the Regulations under the *Act*, ENWIN will correct the bills and charge or rebate the Customer in accordance with any legislation, regulations and/or codes.

For all energy supplied, the Customer shall pay a reasonable sum based on the reading of any meter formerly or subsequently installed on the premises by ENWIN, with due regard being given to any change in the character of the installation and/or the demand. In the event of over-registration or over-billing, ENWIN will reimburse the Customer for the amount incorrectly billed in accordance with applicable laws, regulations and/or codes.

Where Measurement Canada has become involved in a dispute between ENWIN and the Customer, Measurement Canada will act as an arbitrator and will determine the appropriate time period for adjustments.

### **2.3.7.7 *Meter Dispute Testing***

Metering inaccuracy is an extremely rare occurrence. Most billing inquiries can be resolved between the Customer and ENWIN without resorting to the meter dispute test. Either ENWIN or the Customer may request the service of Measurement Canada to resolve a dispute. If the Customer initiates the dispute, ENWIN will charge the Customer a meter dispute fee if the meter is found to be accurate and Measurement Canada rules in favour of ENWIN.

## **2.4 Tariffs and Charges**

### **2.4.1 Service Connections**

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

A Customer who wishes to open an account for the supply of electricity by ENWIN shall contact ENWIN by phone, facsimile, mail, email, ENWIN's website or other means acceptable to ENWIN. ENWIN may require the Customer to provide information, including but not limited to photo identification and/or a lease agreement, to confirm their identity or legitimacy prior to opening a new account. ENWIN also reserves the right to deny opening a new account if the customer owes money to ENWIN on another account.

A change of occupancy charge will apply to all accounts opened by a new Customer. Notification must be provided at a minimum of two (2) business days prior to the opening of the account or the Customer may be assessed an additional priority connection service charge, which will be charged on an actual cost, time and materials basis or a pass-through of third-party costs. A Customer's lawyer or another person with a valid Power of Attorney for the Customer may act on the Customer's behalf with the same effect and assumption of responsibilities by the Customer.

If responsibility for the billing of electricity service to a premises is not provided through the opening of an account, ENWIN may disconnect the supply of electricity without notice. ENWIN is not liable for any damages arising from such disconnection.

If an account is opened in more than one person's name, all persons are deemed to be financially responsible Customers of ENWIN, and all jointly and severally agree to comply with and to pay the rates and charges in accordance with these Conditions of Service. The Customer(s) shall be responsible for payment to ENWIN for the supply of electricity to the property up to the date of the termination of the account.

A Customer who wishes to close an account with ENWIN must notify ENWIN by phone, facsimile, email, mail, ENWIN's website or other means acceptable to ENWIN. Notification must be provided at a minimum of two (2) business days prior to the closing of the account. Notification of the closing of an account will not be accepted for a date in the past or fewer than two days in the future. If a Customer wishes to close an account where a Retailer is involved, the closing will be governed by applicable laws and regulatory codes including, but not limited to, the Retail Settlement Code.

Prior to proceeding with a disconnection request initiated by a property owner or landlord, ENWIN will request confirmation that the premises are unoccupied or that notice has been provided to the tenant regarding the disconnection, including the expected duration thereof. ENWIN will rely on such confirmations and maintain records of same.

The *Residential Tenancies Act, 2006* generally prohibits landlords from withholding the reasonable supply of any vital service, including water and electric services, during a tenant's occupancy contrary to the lease agreement. If a Customer wishes to close an account where a tenant is involved, they are responsible for complying with all applicable laws, including without limitation the *Residential Tenancies Act, 2006*, and shall indemnify and hold harmless ENWIN, its directors, officers, employees and agents from any claims made by any third parties and/or penalties in connection with the closing such an account.

Charges for distribution services are made as set out in the Tariff of Rates and Charges available from ENWIN. Notice of rate revisions shall be published on the OEB's website at <https://www.oeb.ca/industry/applications-oeb/electricity-distribution-rates>.

Information about changes will also be provided to all Customers with the first billing issued at revised rates.

#### *2.4.1.1 Customers Switching to Retailer*

There are no physical service connection differences between Standard Supply Service Customers and third-party Retailers' Customers. The supply of electricity to both types of Customers is delivered through ENWIN's distribution system with the same distribution requirements. Therefore, all service connection requirements applicable to ENWIN's Customers are applicable to third party Retailers' Customers.

### **2.4.2 Energy Supply**

#### *2.4.2.1 Standard Supply Service*

All ENWIN Customers are Standard Supply Service Customers until ENWIN is informed by the Customer or the Customer's authorized Retailer of their switch to a competitive electricity supplier. The Service Transfer Request ("STR") must be made by the Customer or the Customer's authorized Retailer.

#### *2.4.2.2 Retailer Supply*

Customers transferring from Standard Supply Service to a Retailer shall comply with the STR requirements as outlined in Sections 10.5 through 10.5.6 of the Retail Settlement Code. All requests shall be submitted as electronic file and transmitted through an approved Electronic Business Transaction System ("EBT") Hub. STRs shall contain information as set out in Section 10.3 of the Retail Settlement Code.

If the information is incomplete, ENWIN shall notify the Retailer about the specific deficiencies and await a reply before proceeding to process the transfer.

#### *2.4.2.3 Wheeling of Energy*

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

### **2.4.3 Deposits**

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

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

The amount of the account security deposit will be based on the billing cycle factor times the estimated average bill during the most recent 12 consecutive months within the past two (2) years. The billing factor is two and a half (2.5) for monthly billed Customers.

Where there is no established historical electricity consumption information for the service premises, the deposit will be based on a reasonable estimate using information from a like property used for similar purposes or the monthly average billing within the rate class, with no distinction between tenants and owners.

Where the Customer, other than a residential electricity Customer, has more than one disconnection notice in a relevant 12-month period, the highest bill in the period will be used for the calculation of the deposit.

If requested, Customers will be permitted to pay any security deposit required in equal installments over a maximum of four (4) months, or over a period of six (6) months for residential Customers. However, where a customer fails and/or refuses to pay their security deposit, their service will be disconnected for failure to pay in compliance with all applicable legislation, regulations and codes, and ENWIN will commence collections proceedings.

The requirement to pay a security deposit may be waived by ENWIN based on one of the following criteria:

- a) The Customer has a good payment history based on the most recent Customer history with some portion having occurred in the most recent 24 months, during which time the Customer:
  - had no more than one (1) notice of disconnection;
  - had no more than one (1) payment returned for insufficient funds ("NSF");
  - had no disconnect/collection trips occur; and
  - had no security deposit applied for amounts owing.

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

- Residential – one (1) year
- Non-residential <50 kW demand rate class – three (3) years
- All other classes - seven (7) years

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

c) The Customer (other than those in a >5,000 kW demand rate class) provides a satisfactory credit check at its expense. The acceptable Equifax Credit scores are as follows:

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

d) When required, Residential account deposits may be waived where the Customer enrolls in ENWIN's equal monthly payment plan or pre-authorized payment plan and supplies at least two pieces of identification information, provided that a deposit will be required if one of the following events occurs within 12 months of enrollment in the plan: i) the Customer terminates the plan; ii) the Customer receives more than one notice of disconnection; iii) more than one payment by the Customer has been returned for insufficient funds; iv) a disconnect/collect trip has occurred; or v) in the case of an equal monthly payment plan, the plan has been cancelled due to non-payment in accordance with the Standard Supply Service Code.

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

f) The residential Customer has been qualified as an "eligible low-income Customer" and requests a waiver.

The credit history of a separate legal entity or a company that carries on business under a different business name cannot be used to provide a non-residential Customer with a security deposit waiver irrespective of common ownership or affiliation.

ENWIN reserves the right to deny a security deposit waiver request at its sole discretion. The security deposit may be reduced for non-residential Customers with 50 kW or greater demand if the Customer has a credit rating from a recognized credit rating agency (Dominion Bond Rating Service, Standard & Poor's or Moody's). The maximum amount of deposit required will be reduced as follows:

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

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

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

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

ENWIN will undertake an annual review of all security deposit requirements for each Customer based on the good payment history described in this document.

- Where it is determined that all or part of the deposit is no longer required, the account will be credited with the amount of the deposit plus accumulated interest.
- Where it is determined that a deposit is now required or needs to be adjusted upward, the amount of the deposit will be added to the next regular bill and is payable by the due date of that bill, except for residential Customers, which shall be permitted to pay the adjusted amount in equal installments over a period of at least six (6) months. As with all outstanding balances, payment arrangements that are satisfactory to ENWIN may be made.
- For Customers in the >5,000 kW demand rate class, where the Customer is in a position to have some or all of the deposit refunded, only 50% of the deposit will be returned. A higher refund requires a credit rating from a recognized credit rating agency based on the criteria previously stated.

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

Upon closure of the Customer's account with ENWIN, including a Customer move from Standard Supply Service to a competitive Retailer where the Retailer is performing the billing function (retailer consolidated billing), for all account types, the balance of the security deposit plus accumulated interest, after all amounts owing are paid, will be returned to the Customer within six weeks of the closure of the account.

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

#### **2.4.4 Billing**

ENWIN renders bills to its Customers monthly. Bills for the use of electrical energy may be based on either a metered or an unmetered connection.

Customers that are metered will be billed based on an actual meter reading. During periods when an actual meter reading is unavailable, Customers will be billed in accordance with the validating, estimating, and editing ("VEE") process as described in Section 5.3 of the DSC. Totalization of individually metered accounts is not allowed.

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

#### **2.4.5 Payments and Overdue Accounts Interest Charges**

ENWIN accepts payments in the form of a cheque (mailed to ENWIN), credit card (utilizing a third party service provider) and through most financial institutions (either directly or through Pre-Authorized Payments). In accordance with the Distribution System Code, payments made on an account with multiple services will first be applied to current and overdue electric charges before being applied to charges for other services. Customers may request alternate payment allocations in accordance with ENWIN's procedures.

An equal monthly payment plan is available to Customers as per the Standard Supply Service Code whereby a monthly bill is issued to a Customer and the amount due in each bill is equalized over the course of a year. The equal monthly payment plan option is not available when the Customer is in arrears on payment to ENWIN for electricity charges and has not entered into an arrears payment agreement.

Bills are payable in full by the due date. Otherwise, overdue interest charges will apply at a rate of 1.5% monthly (19.56% annual compounded rate). For clarity, daily interest rate will be calculated on the 1.5% monthly interest rate, not the 19.56% annual compound

rate. 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 of the bill outstanding at the due date. The Customer will be required to pay additional charges for the processing of non-sufficient fund (“NSF”) cheques.

Outstanding bills are subject to the collection process and may ultimately lead to service being discontinued. Service will be restored once satisfactory payment and/or payment arrangements have been made (refer to Section 2.2.1) and a reconnection charge may be applied to the Customer's account. The reconnection charge is waived for low-income Customers, and other residential Customers unable to pay the charge may be offered reasonable payment arrangements.

## **2.5 Customer Information**

ENWIN's Privacy Policy Statement describes how and why ENWIN collects, uses, discloses, handles, and protects the personal information of its Customers or members of the public. It also addresses the reasons why personal information is collected, used, or disclosed, how the information is safeguarded, and outlines individual's rights with respect to this information. ENWIN's Privacy Policy Statement can be found on its website.

A third party who is not a Retailer may request historical usage information with the written authorization of the Customer to provide their historical usage information. ENWIN will provide information appropriate for operational purposes that has been aggregated sufficiently, such that an individual's information cannot reasonably be identified, to another distributor, a transmitter, the IESO or the OEB at no charge. ENWIN may charge a fee that has been approved by the OEB for all other requests for aggregated information.

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

Upon receiving an inquiry from a Customer connected to its distribution system, ENWIN 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.

An embedded distributor that receives electricity from ENWIN shall provide load forecasts or any other information related to the embedded distributor's system load to ENWIN, as determined and required by ENWIN.

## 2.6 Additional Information

### 2.6.1 Locating Underground Powerlines

A Customer who requires that ENWIN locate underground powerlines owned by ENWIN shall call Ontario One Call at 1-800-400-2255 or visit the Ontario One Call website at [OntarioOneCall.ca](http://OntarioOneCall.ca) to request a location of underground powerlines. ENWIN shall locate underground powerlines or other equipment owned by ENWIN up to the ownership demarcation point at no charge to the Customer.

## SECTION 3 CUSTOMER CLASS SPECIFIC

### 3.1 Residential

#### 3.1.1 General

A Residential Rate Class Service is a 120/240 V single-phase supply to a single-family dwelling, duplex, triplex, 4-plex or 6-plex, town home or multi-unit – individually metered apartment, located on a parcel of land zoned by the City of Windsor Building Department for domestic or household purposes and where the Customer uses the dwelling as a home.

Where a Customer operates an advertised business from a building that may or may not be used as a dwelling, ENWIN may elect in its sole discretion to deem that the Customer's rate class will be General Service. In addition, a 4-plex, 6-plex and multi-unit residential establishment such as an apartment building, where supply to the building is provided by ENWIN through one service rather than to individual units, shall normally be classified as General Service. Please refer to Sections 3.2 and 3.3 of these Conditions of Service for further explanation.

Service to a single or a small number of building lots will normally be via underground construction. However, each project will be reviewed on a case-by-case basis with consideration being given to how other lots in the area are currently served and future plans for servicing the area.

The Basic Connection as defined in Section 2.1.1.1 of these Conditions of Service, or equivalent credit for each residential service, is provided by ENWIN at no up-front charge to the Customer.

A Variable Connection charge will be required where the installation costs are beyond those of the Basic Connection. Payment of the Variable Connection cost by the Customer must be completed prior to connection of the service. The following conditions apply:

- 1) The Customer will be required to file a permit request or enter into a Connection Agreement with ENWIN.
- 2) Each new, rebuilt, altered or relocated individual residential service of 200 amperes or less shall have a meter socket located outdoors in an approved accessible location. Individually metered units may have meters mounted indoors in an area approved by ENWIN.
- 3) The method and location of electrical supply will be established through consultation with ENWIN.
- 4) Underground supply may be installed and the cost beyond the basic amount is the responsibility of the residential Customer.
- 5) Where it is necessary to expand the main distribution system, ENWIN will make an Offer to Connect, which will be fair and reasonable, based on ENWIN's engineering design standards and Sections 2.1.2 and 2.4 of these Conditions of Service.

### *3.1.1.1 Overhead Secondary Service*

The meter socket, conduit and service standpipe (stack) are supplied and installed by the Customer according to the following specifications:

- 1) Minimum capacity of the meter socket is 100 amperes (standard).
- 2) Installation of the meter socket is such that midpoint of the meter will be 1730 mm (5 ft., 8 in.) plus or minus 100 mm (4 in.) from finished grade.
- 3) Socket is to be located not more than 3 m (10 ft.) back from the side of the residence nearest to the distribution lines for electrical distribution supply from the street. Where the electrical supply is from a rear lot location, the Customer will consult with ENWIN for a meter spot location.
- 4) The meter socket shall be a standard, ring-type, minimum 100 A, CSA-approved 4 jaw meter socket.
- 5) Where a clevis-type insulator (mast or wall-mount) is to be used, it shall be supplied by the Customer and be of a type approved by CSA. The clevis must be on the face of the building that is parallel to the electrical distribution plant when using a wall-mounted point of attachment.

- 6) The point of attachment must be of sufficient height to provide, under maximum sag conditions of the conductors, a clearance of at least 4.7 m between utility service conductors and finished grade over lands accessible to vehicles and 3.7 m over or alongside walkways or areas unlikely to be travelled by vehicles. A minimum horizontal clearance (under maximum swing conditions of the conductors) of 1 m must be provided from utility service conductors so that they cannot be reached by a person: (1) standing on a readily accessible surface such as a balcony, stairway, or fire escape, or (2) reaching from a window or door. Additionally, a minimum vertical clearance (under maximum sag conditions of the conductors) of 2.5 m must be provided from utility conductors passing over a readily accessible surface such as a balcony, stairway, or fire escape.
- 7) Points of attachment must be selected such that service conductors shall only traverse the property of the party served. Should this not be possible, it is the responsibility of the Customer to obtain an easement in favour of ENWIN for the conductors passing over a neighbouring property.
- 8) Points of attachment should also be selected such that the service conductors shall not pass through trees or over swimming pools.
- 9) It is the responsibility of the Customer to consult with ENWIN to determine a point of attachment and to provide a point of attachment which meets these requirements.
- 10) The maintenance of the point of attachment, the stack or clevis and its attachment to the building and the meter socket, is the responsibility of the Customer.

### *3.1.1.2 Underground Secondary Service*

The trenching, meter socket and conduit are supplied and installed by the Customer according to the following specifications:

- 1) The trench shall be 915 mm (36 in.) in depth and 300 mm (12 in.) in width. In preparation for the electrical cable, the Customer must establish a 100 mm (4 in.) sand bedding and provide sufficient additional sand on site beside the trench (approximately 1 cu. yd. every 15 ft.) for ENWIN to place a 200 mm (8 in.) sand covering over the top of the electrical cables after they are laid. Sand shall be free of stone and shall be masonry grade sand. The Customer must backfill the trench with select backfill material which is free of glass, bricks, stones, etc.

- 2) If weather conditions are such that the sand pile will freeze, the Customer will provide sufficient bales of straw alongside the trench in lieu of the required sand so that the compacted straw will lay with a clear cover of 100mm (4 in.) over the top of the cables. The property line cable stub and service conduit at the residence are to be properly exposed and accessible to the base of the trench for ENWIN to lay, pull in and connect the secondary conductors.
- 3) To avoid open cut of cement driveways for future maintenance purposes, the Customer shall provide an appropriate electrical conduit 100 mm (4 in.) crossing for the underground cable. Under no circumstance will drainage pipe be permitted.
- 4) The minimum physical size of the meter socket will be 300 mm (12 in.) wide X 510 mm (20 in.) high X 115 mm (4 1/2 in.) deep.
- 5) For services up to 200 ampere the meter socket shall be rated at 200 amp heavy duty, ring-type 4 jaw stud style (threaded studs on the line side to accept ENWIN cables).
- 6) Mounting of the meter socket is such that the midpoint of the meter will be 1730 mm (5 ft., 8 in.) plus or minus 100 mm (4 in.) from finished grade and not more than 3 m (10 ft.) back from the front of the residence nearest to the distribution lines at the street. Where the electrical supply is from a rear lot location, the Customer will consult with ENWIN for a meter spot location.
- 7) ENWIN will provide and install compression lugs on the line side conductors and connect to studs.
- 8) ENWIN will also provide 1 hole copper rated compression lugs and make connections to the current transformers. 1 hole aluminum lugs shall be supplied by the Customer when aluminum wire is used. However, ENWIN will still make the connections to the current transformers.
- 9) Line side entrance conduit is to be rigid 50mm (2 in.) from the meter socket to a point 1 metre (3 ft.) below grade. A 45-degree sweep shall be placed at the bottom of the entrance conduit if the conduit entrance would interfere with the foundation of the building. Drawings are available upon request from the Technical Services department.
- 10) The conductors of the line side of the meter socket and those on the load side of the meter socket shall not be installed in the same conduit.

- 11) For services greater than 200 amp, two secondary conductor runs will be installed up through the 2 – 50 mm (2 - 2 in.) entrance conduit and terminated on the line side lugs and, the conductors will continue from the load side of the socket into the Customer owned indoor main disconnect.
- 12) All new underground secondary services shall be installed in accordance with ENWIN's standard drawings which are available upon request from ENWIN's Technical Services department.

### **3.1.2 Early Consultation**

Application to Connect a Residential Service - The Customer shall supply the following to ENWIN well in advance of installation commencement:

- 1) Required in-service date.
- 2) Requested Service Entrance Capacity and voltage rating of the service entrance equipment.
- 3) Locations of other services, gas, telephone, water and cable TV.
- 4) Details respecting heating equipment, air-conditioners, electric vehicle chargers and any appliances, which demand a high consumption of electrical energy.
- 5) Survey plan and site plan indicating the proposed location of the service entrance equipment with respect to public rights-of-way and lot lines.
- 6) For multiple dwellings, a layout drawing is required showing the number of units/meters required and the size of electrical service to each unit.
- 7) Name and contact number for the electrician installing the meter socket.
- 8) Name and contact number of the owner.
- 9) Name, contact number and mailing address of the party in whose name the account will initially be set up.
- 10) An address that has been approved by the City of Windsor and confirmation from the City of Windsor of the assignment of the address. Where unit numbers are to be used in a multi-unit residential building, the City of Windsor shall approve the unit numbers.
- 11) Where multi-unit residential units are to be served, the meter sockets shall be labeled and matched to unit numbers on the individual dwelling units.
- 12) Payment of any fees or charges.
- 13) Provision of any easements that may be required.

### **3.1.3 Point of Demarcation**

### *3.1.3.1 Operational Control*

As described in Section 1.7.7 of these Conditions of Service, the ownership demarcation point is the point at which the responsibility for maintenance of the plant changes from ENWIN to the Customer. For Residential Customers, ENWIN has operational control of the electrical delivery system up to and including the point of Ownership Demarcation. In addition, ENWIN shall have operational control of the metering equipment.

For overhead and underground construction, ENWIN has control of the electrical delivery system up to and including the meter. This operational responsibility and control is ensured by ENWIN through their sealing of the mechanical interface between the meter and the meter socket. Everything beyond the meter is the operational responsibility of the Customer.

### *3.1.3.2 Ownership Responsibilities*

For overhead construction, ENWIN's ownership responsibilities are the meter (excluding the meter socket) and the triplex to the point of connection at the head of the standpipe (stack), including the connectors. The Customer is responsible for the conductors from the point of connection at the head of the stack to the meter socket.

For underground construction, ENWIN's ownership responsibilities are the meter (excluding the meter socket) and the underground electrical service cable up to the line terminating side of the meter socket. This responsibility may vary with services over 200 A and is subject to individual definition.

### **3.1.4 Access**

Service locations requiring access to adjacent properties (mutual drives, narrow side setbacks, etc.) will require the provision of an easement from the property owner(s) involved. It is the responsibility of the Customer to obtain this easement in favour of ENWIN.

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

### **3.1.5 Metering**

The Customer will supply and install a meter socket acceptable to ENWIN. Meter sockets will be installed such that it is directly accessible to ENWIN staff and:

- 1) Mounted on the exterior of the building and in accordance with the requirements outlined in Section 2.3.7.2.
- 2) Installed ahead of (on the line side of) the main disconnect switch.
- 3) For all new services or where a Customer makes a change to their existing service where the service stack, the conductors in the service stack, or the service entrance switch are changed, the Customer shall move the meter outdoors and supply an ENWIN approved meter socket. This meter socket base shall be installed outside in a location that is accessible and approved by ENWIN.
- 4) For residential underground services to new buildings the meter shall be located within 3.0m of the front of the building. A clearance of 1m (3 ft.) is required between the meter and the property line. For existing underground services which must be relocated or upgraded, the existing entry location to the house may remain provided that the meter is moved outside, is not obstructed and ENWIN has access at all times to read or replace the meter.

### **3.1.6 Inspection**

Prior to energization of the service, ENWIN requires notification from the Electrical Safety Authority that the electrical installation within a building has been inspected and approved by the Electrical Safety Authority (Connection Authorization). Provision for metering shall be inspected and approved by ENWIN prior to energization.

All services shall be installed by ENWIN, or by an ENWIN-approved contractor.

The Customer shall install trenching and any ducting. In the latter case, all work done by the Customer shall be as specified by ENWIN and subject to inspection by ENWIN.

### **3.1.7 Maintenance of Customer Equipment**

The Customer is responsible for maintaining their equipment (clevis, meter socket, standpipe, standpipe conductors, etc.) in good repair. The Customer shall respond forthwith to any request by ENWIN to repair or replace the Customer's equipment. Where the Customer fails to maintain their equipment, when requested to do so by ENWIN, the Customer shall be subject to discontinuation of service. Services so disconnected may be subject to a service charge for reconnection. Where ENWIN, in its sole discretion,

believes the Customer's equipment to be in a condition that is dangerous to people or property, ENWIN may immediately disconnect that service.

### **3.1.8 Replacement of Services**

Where ENWIN replaces a service, the Customer shall be responsible for restoration of Customer's lands and appurtenances, which may be disrupted or damaged during the course of the replacement of the Customer's service. This shall include sod and landscape repair, driveway repair, brush cleanup, damage to Customer's sprinkler systems, fences or any other feature on the Customer's property.

### **3.1.9 Tree Planting/Tree Trimming**

The Customer shall ensure that tree planting shall not take place directly under service (supply) conductors or meters.

For private property low voltage service, Customers should ensure that trees on their property are not allowed to grow into the service conductors. Where trees on the Customer's property have grown into the service conductors, Customers are to call ENWIN to review and evaluate the proper clearance. If tree trimming is required, ENWIN will provide this service to the Customer at no charge.

Customers wishing to remove trees shall be provided an isolation of their service during normal working hours to provide safe working conditions at no charge.

ENWIN will generally not provide services to remove trees. However, where a Customer wishes to remove a tree in close proximity to ENWIN's primary overhead conductors, the Customer should contact ENWIN to discuss arrangements for the safe removal of the tree.

## **3.2 General Service**

### **3.2.1 General**

All electrical service supplied to premises, excluding those classified as Residential, Large Use, Dedicated Transformer Station, Street Lighting, Unmetered Scattered or Sentinel Lighting, shall be classified as General Service. For the purposes of these Conditions of Service, the premises of this class of Customer is considered a structure

located on a parcel of land occupied by one Customer and is predominantly used for commercial, institutional or industrial purposes.

Where the wiring does not provide for separate residential/commercial metering, combined residential/business buildings shall normally be classified as General Service in ENWIN's sole discretion.

Service to a single commercial, institutional or industrial unit will normally be via underground construction. However, each project will be reviewed on a case-by-case basis with consideration being given to how other lots in the area are currently served and future plans for servicing the area.

### **3.2.2 Basic Connection**

The Basic Connection for General Service is provided by ENWIN at no up-front charge to the property owner. The Basic Connection is the Residential Basic Connection or equivalent credit.

The General Service Customer may pay a Variable Connection charge where the installation costs are beyond those of the Basic Connection. Payment of the variable connection cost by the Customer must be completed prior to connection of the service. The following conditions apply:

- 1) The property owner may be required to enter into a Connection Agreement with ENWIN.
- 2) The installation cost of the underground supply beyond the Basic Connection is the responsibility of the property owner.
  - a. Where it is necessary to expand the main distribution system, ENWIN will make an Offer to Connect, which will be fair and reasonable, based on ENWIN's engineering design standards and Sections 2.1.2 and 2.4 of these Conditions of Service.
- 3) ENWIN may reduce the amount charged to the Customer where an economic evaluation of the present value of the expected revenue stream and the expected costs of the distribution system expansion indicate that ENWIN can earn its allowed rate of return for its investment by charging the Customer a lesser amount. The economic evaluation shall be performed as described in the Distribution System Code. The costs for the expansion of the distribution system included in the economic evaluation shall include the minimum plant necessary to connect and supply the Customer subject to the following:
  - a. For overhead service, the Customer shall be responsible for all costs of a service beyond one span (up to 30 m) on their property.
  - b. For underground service, the Customer shall be responsible for all costs of a service beyond 50 m on their property.

- c. The Customer shall be responsible for all costs beyond the minimum costs necessary to provide service which the Customer requests for their convenience.

For Underground/Padmount Transformer Service, ENWIN shall supply the transformer (as set out in Section 2.3.4.2 of these Conditions of Service) and conduit (including duct spacers, primary cable, grounding cables and ground rods, primary connections, fusing and secondary connections). ENWIN shall install the transformer, primary cable, ground rods and grounding cables, fusing and primary and secondary connections. The Customer shall supply and install bollards, blast walls, trenching and restoration, warning tape, transformer pad, concrete for encasement of ducts and the Customer's own secondary cables. The Customer shall install the ducts and trench ground cables according to specifications and drawings that will be provided by ENWIN for each project.

Customer's construction shall be subject to inspection by ENWIN and the Customer shall provide ENWIN with a minimum 48 hour notice prior to commencement of work. The Customer shall not cover any trench prior to inspection by ENWIN. The Customer may be liable to pay ENWIN for costs of inspection in accordance with prevailing rates.

### **3.2.3 Early Consultation**

For an Application to Connect a General Service, ENWIN cannot provide detailed requirements that would be applicable to all cases. Therefore, the Customer must consult with ENWIN in the early planning stages to ascertain ENWIN's requirements.

The Customer shall submit to ENWIN the following information:

- 1) Required in-service date.
- 2) Voltage requirements.
- 3) Estimated initial maximum demand.
- 4) Estimated future maximum demand.
- 5) Estimated average annual demand.
- 6) Estimated average annual energy consumption.
- 7) Specific listing of the type of loads for lighting, motor, heating, air conditioning or other, including details of any large motor contemplated by the Customer.
- 8) Number of suites and the areas of each.
- 9) Grading plan and site plan, to scale, showing the building, apartment or office building in relation to existing or proposed property lines, and other buildings or structures such as parking garages and loading ramps. The plans shall include vertical and horizontal views of the proposed incoming duct bank from the Point of Entry to the Delivery Point.

- 10)Area plan showing location of property within the City of Windsor and zoning designation for the property and immediately surrounding properties.
- 11)Plan, to scale, of the area in which the transformer pad/vault is to be located, showing all details of the pad/vault.
- 12)Plan, to scale, showing the electrical room and provision for the metering equipment.
- 13)For multiple units, a layout drawing is required showing the number of units/meters required and the size of electrical service to each unit.
- 14)Plans shall be submitted in electronic form, per ENWIN specifications and shall not be copyright, or if copyright, a release shall be provided by the copyright holder allowing ENWIN to make copies of the drawings and alter a copied version if it so desires.

### **3.2.4 Point of Demarcation**

#### *3.2.4.1 Operational Control*

The ownership demarcation point is the point at which the responsibility for maintenance of the plant changes from ENWIN to the Customer. For General Service Customers, ENWIN has operational control of the electrical delivery system up to and including the point of Ownership Demarcation, after which the Customer is responsible for its plant. However, ENWIN shall have operational control of the metering equipment.

#### *3.2.4.2 Points of Ownership Demarcation*

ENWIN shall determine the ownership demarcation points in its sole discretion, and ENWIN shall be responsible for the plant up to the ownership demarcation point. The Customer shall be responsible for the Customer's plant downstream of the ownership demarcation point with the exception that ENWIN shall own the meter, including any instrument transformers downstream of the ownership demarcation point. Ownership demarcation points are as follows:

**Customer Owned Pole:** ENWIN shall provide service from street bus to a Customer owned clevis on a Customer owned pole. The clevis is the ownership demarcation point. The Customer shall provide conductor from this point to the Customer's building. ENWIN shall own the meter (excluding the meter socket) and any instrument transformers and test link panels associated with the metering. The Customer shall provide, own and maintain a meter socket, meter cabinet and/or metering cubicle in Customer's switchgear.

**ENWIN Pole:** For General Service Customer services up to 200A, where Customers desire an overhead to underground service from an ENWIN pole to Customer conductors at a Customer owned F-head on the ENWIN pole, ENWIN may allow the Customer to attach their conduit to an ENWIN pole. ENWIN may not allow this in all cases and the

Customer must remove and relocate their conduit at the Customer's expense, upon request of ENWIN in the future. The Customer is responsible to obtain any required permits or easements for their cable on public right of way or private property and shall present those permissions to ENWIN. ENWIN shall provide service from the street bus to the Customer's conductors at the Customer-supplied conduit and F-head at the pole. The point of attachment of ENWIN's conductors to the Customer's conductors is the ownership demarcation point. The Customer shall provide conductor from this point to the Customer's building. ENWIN shall own the meter (excluding the meter socket) and any instrument transformers and test link panels associated with the metering. The Customer shall provide, own and maintain a meter socket, meter cabinet and/or metering cubicle in Customer's switchgear.

**Customer Stack/Clevis:** ENWIN shall provide up to 30 m of conductor to the Customer's stack or clevis at the Customer's building to be served. The stack or clevis shall be located in consultation with ENWIN. The ownership demarcation point is the point of connection between ENWIN conductors and the Customer's conductors, however ENWIN shall own the meter (excluding the meter socket) and any instrument transformers and test link panels associated with the metering. The Customer shall provide, own and maintain a meter socket, meter cabinet and/or metering cubicle in Customer's switchgear.

### **3.2.5 Access**

Service locations requiring access to adjacent properties (mutual drives, narrow side setbacks, etc.) will require the provision of an easement from the property owner(s) involved in favour of ENWIN, at the Customer's expense.

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

### **3.2.6 Metering**

Where individual metering is used in a multi-unit complex, the service boxes must be identified with unit numbers clearly and legibly painted on the box. Units shall be numbered, and copies of a floor plan shall be forwarded to ENWIN's Technical Services department and also mounted in a suitable manner in each meter room, indicating the unit to which each service box supplies power. The service will not be connected unless the numbers on the service box and those on the units correspond and the plan is posted. The building owner shall consult with ENWIN prior to making any changes in the unit numbers, including any unit consolidations or splits, as it may have an impact on billing accuracy.

Where primary metering is considered, the Customer shall consult ENWIN to discuss the feasibility of primary metering and the specific requirements for that metering.

### 3.2.7 Inspection

Prior to energization of the service ENWIN requires notification from the Electrical Safety Authority that the electrical installation within a building has been inspected and approved by the Electrical Safety Authority. Provision for metering shall be inspected and approved by ENWIN prior to energization. For further details, refer to Section 2.1.4 - Inspections Before Connection of these Conditions of Service.

All service conductors owned by ENWIN shall be installed by ENWIN. All service conductors owned by the Customer shall be installed by the Customer's ENWIN - approved Contractor.

The Customer shall install, own and maintain all primary and secondary trenching and ducting. All work done by the Customer shall be as specified by ENWIN and subject to inspection by ENWIN.

### 3.3 General Service (Above 50 kW)

Commercial Customers whose load averages over 50 kW for the last 12 month period are classified as General Service > 50 kW Customers.

General Service > 50 kW Customers may be served by the same means as General Service < 50 kW Customers, in which case the requirements for General Service < 50 kW will apply. Where General Service Customers are served from Padmount transformers on their property, the following will apply.

#### 3.3.1 Ownership Demarcation

See Section 3.2.4 of these Conditions of Service for more information about ownership demarcation for General Service Customers. In addition, for General Service Customers > 50 kW:

**Padmount transformer secondary paddles:** The Customer shall bring the Customer's secondary cables to the secondary connection bushings of the padmount transformer. The Ownership demarcation point is the secondary bushings on the transformer. ENWIN shall provide the secondary bushings and terminate them on the Customer's cable. ENWIN shall own the meter (excluding the meter socket) and any instrument transformers and test link panels associated with the metering. The Customer shall provide, own and maintain a meter socket, meter cabinet and/or metering cubicle in Customer's switchgear. The Customer shall own and maintain the Customer installed transformer foundation, any pulling vaults and primary duct.

### **3.3.2 Location of Transformers**

The transformer locations on Customer's property are determined in consultation with ENWIN. For more details on padmount transformers contact ENWIN's Technical Services department. ENWIN may require the Customer to provide an easement across the Customer's property for any ENWIN cables and the transformer.

### **3.3.3 Supply of Equipment**

ENWIN supplies, installs and maintains:

- 1) Primary switchgear.
- 2) Primary transformation equipment, up to and including the secondary bushings. ENWIN may supply and install transformers up to the limits shown in Section 2.3.4 of these Conditions of Service.
- 3) Meter, instrument transformers and test link panels. Where appropriate, ENWIN will provide a cellular modem or telephone line sharing device, at the Customer's expense, and the Customer must provide a powered 120/240V supply to the metering cabinet if directed by ENWIN.
- 4) Secondary cable connectors within the transformer vault or, where the service entrance capacity exceeds 800 amperes, secondary bus-bars.

Note: Maintenance or replacement of all primary underground looped cables which form part of the connection assets shall be performed by ENWIN. Following maintenance, surface restoration by ENWIN will include only soil, sod, gravel or asphalt. Where damage can be shown to be caused by the Customer, maintenance, repair and restoration are at the Customer's expense.

- 5) Where the primary cable supplying a transformer is in excess of 50 m, the Customer may choose to pay ENWIN to install a second, stand-by cable which may be able to be put in service in less time than it would take to replace a cable should the main primary cable fail. The Customer shall be responsible for 100% of the cost of any primary cable in excess of 50 m.

The Customer shall supply, install and maintain:

- 1) All civil infrastructure on the Customer's property including the transformer pad/vault, any splicing vaults, duct and associated equipment. Where vaults and manholes are installed in traffic areas, the Customer shall maintain these vaults such that the load and traffic bearing capabilities of the vaults are maintained. Where transformers are to be installed in a Customer vault, the Customer shall provide for vault drainage and ventilation, including power ventilation, lighting, a 120/240V power outlet and a secure entrance point accessible by ENWIN personnel from the building exterior. For more details contact ENWIN's Technical Services department.

- 2) ENWIN will provide dual primary ducts up to 50 m, for installation and concrete encasement by the Customer. The Customer shall provide and install any primary duct in excess of 50 m. For more details contact ENWIN's Technical Services department.
- 3) Where ENWIN has determined that its primary cables may not be readily pulled through the duct bank, the Customer shall also design, supply, install and maintain a pulling manhole(s) or vault(s) on the property to ENWIN's specifications.
- 4) Where ENWIN's distribution system is underground the Customer shall be responsible for the supply and installation of ducts to ENWIN's specifications at locations where driveways, sidewalks or other concrete or asphalt surface cross the distribution system. Ducts shall be installed prior to the final paving.
- 5) The Customer shall provide a cable tray for secondary cables within the transformer vault for service entrance capacities up to and including 800 A. For all service entrance capacities, only one main secondary disconnect device is to be installed per transformer vault, unless otherwise specified by ENWIN.
- 6) The Customer shall supply and install a meter socket or a metering cabinet and/or metering cubicle in Customer's switchgear to ENWIN specifications. The Customer shall also supply, own, install and maintain main disconnects and individual service disconnect switches. The Customer shall maintain in proper working conditions all Customer owned service disconnecting devices that ENWIN may operate for safety of its operations. ENWIN shall not be held liable if a switch / breaker were to become inoperative or suffer damage during its operation. At the discretion of ENWIN, the Customer may also be required to supply a POTS telephone line to the metering cabinet. The telephone line shall be available to ENWIN 24 hours per day, 7 days per week. The telephone line shall be provided to ENWIN free of charge. Upon request, ENWIN may be able to share a telephone line with the Customer. Alternatively, a Customer may be required to supply a 15 A duplex receptacle within 6 ft. of the meter to power the cellular modem required for remote interrogation of the interval metering system. The Customer will be responsible to pay associated data communication charges in accordance with ENWIN's Tariff of Rates and Charges in the absence of an analogue phone line.
- 7) Dry-type transformers for other utilization voltages.

### **3.3.4 Short Circuit Capacity**

The Customer shall ensure that their service entrance equipment has an adequate short-circuit interrupting capability. The maximum available short-circuit symmetrical current amperes on ENWIN's 27.6/16 kV distribution system is 17 kA. However, the available short circuit amperes at any specific location may normally be less. ENWIN will advise, on request, the maximum available short-circuit symmetrical current at any specific location. Customers who choose to protect their systems for less than the maximum available short-circuit capacity do so at their own risk.

Customers are advised that ENWIN's distribution system is subject to change without notice, from time to time, on either a temporary or permanent basis. These distribution system changes may alter the available short-circuit capacity at the Customer's service entrance. ENWIN will not be held liable for any increase in available short-circuit capacity at any point in the distribution system, nor is ENWIN able to advise Customers of such changes in available short-circuit capacity that occur from time to time. Customers may inquire of ENWIN from time to time as to the currently available short-circuit capacity if they choose to protect their systems for less than the maximum available short-circuit capacity.

### **3.4 General Service (Above 4,000 kW)**

In addition, to the conditions set out above for General Service Customers, all General Service Customers with a monthly demand of 4,000 kW or higher, or require secondary voltages not provided by ENWIN shall be required to provide their own transformation from a primary voltage supply from ENWIN at a Customer-owned substation. Noted below are the technical requirements for such customers' transformer substations.

#### **3.4.1 Electrical Requirements**

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

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

Customer-owned transformers located on the line side of the meter installation must be built in accordance with CAN/CSA Standard C802, Maximum Losses for Distribution, Power and Dry Type Transformers. Transformers with losses exceeding the values specified in this standard are not acceptable.

In addition to obtaining the approval of the Electrical Safety Authority for substation equipment, the Customer must also obtain the acceptance of ENWIN for any components that may affect ENWIN's distribution system (e.g. cables, surge arrestors, terminators, and protective and switching devices). The Customer should allow 3 months from date of submission of a complete application for service for this review.

ENWIN will review and comment upon the original proposal and one corrected proposal for each new substation, free of charge. Costs of any additional review will be charged to

the Customer on a time and materials (i.e., at cost) basis. When modifications are being made to an existing substation, ENWIN will charge the Customer all costs for the review.

To obtain the review, the Customer is required to submit to ENWIN two copies of the detailed plans and the specifications that have been certified by a registered Professional Engineer, containing details.

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. ENWIN will provide Customer interface details and requirements for high voltage supplies.

Customer transformers must be approved by ENWIN. Customers must contact ENWIN's Technical Services department to review Customer's desired transformer configuration.

Customer-owned substations must be inspected by both the Electrical Safety Authority and ENWIN. The Customer is responsible for obtaining a pre-service inspection and commissioning report by a third-party engineering firm, acceptable to ENWIN, confirming that the substation and all its equipment have been tested. The pre-service inspection report must be certified, and copies must be provided to ENWIN's Technical Services department for acceptance before the substation will be energized. ENWIN shall be contacted to witness and verify the commissioning tests performed by the Customer.

When the Customer has completed and submitted the certified pre-service inspection and commissioning report and has received acceptance from ENWIN and approval from the Electrical Safety Authority, ENWIN will energize the substation in accordance with ENWIN's normal operating procedures. There is no charge for this service if it is scheduled in advance during ENWIN's normal business hours and is the first energization of a new or enlarged substation.

Customers must permit access to their substations by ENWIN's employees or authorized agents at all times in order to operate primary disconnect devices on the substations.

### **3.4.2 Maintenance of Substations**

The Customer must ensure that the substation is maintained in a good state of repair and that the primary disconnect devices are accessible and operable.

The Customer may require the operation of primary disconnect devices for purposes of routine maintenance or other reasons. ENWIN requires a minimum of two (2) weeks' notice for planned operation of such devices. One primary disconnect will be performed free of charge during normal business hours (between 8:00 a.m. and 3:00 p.m.) in each calendar year. The Customer will be charged at cost for any subsequent disconnection

requests during that same calendar year or for disconnections and reconnections requested outside of the stated hours.

ENWIN does not guarantee that crews will be available for scheduled disconnections and reconnections and may be subject to delays or cancellation for reasons beyond ENWIN's control such as weather. ENWIN will not be liable to Customers for any such delays. Customers are also responsible for emergency maintenance on their substations and should be aware at all times of the availability of materials and labour to perform emergency repairs in the event of a sudden substation failure.

The Electrical Safety Authority requires that Customers that own their own substations perform and record at least annual maintenance on their substations. ENWIN may require that the Customer submit to ENWIN their report detailing regular and/or emergency maintenance performed on the Customer's substation.

The Customer shall inspect their own substations at minimum intervals of one year for outdoor substations and three years for indoor substations. Where an electricity disconnection may be required at Customer-owned substations to perform inspections, maintenance, and installations, the Customer shall arrange a time for a disconnection by ENWIN.

#### *3.4.2.1 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, percentage 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.

### **3.4.3 Technical Considerations**

#### *3.4.3.1 Short Circuit Ratings*

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

Short circuit current may be obtained upon request to ENWIN.

#### **3.4.3.2 Primary Fusing**

All equipment connected to the ENWIN's distribution system shall satisfy the short circuit ratings specified in Section 3.4.3.1. The Customer and/or the Customer's consultant shall specify the fuse link rating and demonstrate coordination with ENWIN's upstream protection including station breakers and/or distribution fuses. The Customer shall submit, at its expense, a coordination study to ENWIN 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.

#### **3.4.3.3 Ground Fault Interrupting**

Where ground fault protection is required to comply with the Ontario Electrical Safety Code, the method and equipment used shall be compatible with ENWIN's practice of grounding transformer neutral terminals in vaults.

Ground fault protection proposals for supply arrangements shall be submitted to ENWIN for approval before construction of the switchboard.

#### **3.4.3.4 Lightning Arresters**

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

#### **3.4.3.5 Basic Impulse Level**

The Customer's apparatus shall have a minimum Basic Impulse Level of 125kV for 27.6kV grounded supply and 150kV BIL for ungrounded 27.6kV supply installation.

#### **3.4.3.6 Unbalanced Loads**

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

### **3.4.4 Other Technical Information and Considerations**

The same information and considerations apply as for other General Service Customers. Refer to Sections 3.2 and 3.3 for applicable requirements.

### **3.5 Large Use (Above 5,000 kW)**

Customers with a monthly peak load of greater than 5,000 kW averaged over 12 consecutive months are classified by ENWIN as Large Use – Regular Service Customers for the purpose of establishing rates. All the technical requirements for customers whose demand loads are over 4,000 kW also apply to customers in this service classification.

### **3.6 Dedicated Transformer Station**

ENWIN has customers serviced by a customer-dedicated, ENWIN-owned and transmission-connected Transformer Station (“Dedicated Transformer Station”) and, as such, fall under the Dedicated Transformer Station Service Classification as set out on ENWIN’s Tariff of Rates and Charges.

Service by a Dedicated Transformer Station is not generally available to all customers, and requests for such service will be reviewed on a case-by-case basis to determine the capacity to serve the requested supply and any conditions associated with provision of such supply. Supply of such service will also require approval from the transmitter supplying ENWIN.

If a request for service by a Dedicated Transformer Station is to be approved, the customer must enter into a separate agreement with ENWIN setting out the terms and conditions of the supply of such service, which may be subject to review and approval by the Ontario Energy Board.

In addition, Dedicated Transformer Station Service Classification customers will enter into a separate agreement with ENWIN setting out and defining operating procedures, maintenance responsibilities, and approved methods of communication between the parties to help ensure the safety and reliability of the service.

### **3.7 Embedded Generation and Storage Facilities**

This section applies to Embedded Generators and storage facilities that are connected to and operate in parallel with ENWIN’s distribution grid. Customers are required to apply to ENWIN to obtain approval to connect embedded generation and storage facilities in parallel to ENWIN’s distribution grid. This does not apply to emergency back-up generation which operates islanded from ENWIN’s distribution grid.

Connection requirements differ between embedded generation that is less than or equal to 10 kW and that which is over 10 kW. As well, generation that operates primarily

islanded from ENWIN's distribution grid but transfers on and off ENWIN's distribution grid through a parallel connection has specific connection requirements.

In all respects, ENWIN follows the processes, timing and contractual documents outlined in the Distribution System Code for connecting Embedded Generators to ENWIN's distribution grid.

Embedded Generators that supply Customers on the load side of the meter are considered to operate in parallel with ENWIN's distribution grid and are subject to specific technical requirements.

Electricity storage facilities that are connected to ENWIN's distribution grid on either side of the load meter are subject to specific technical requirements.

The technical requirements for connecting, operating and maintaining embedded generation and storage facilities to ENWIN's distribution grid are available upon request from ENWIN's Technical Services department.

### **3.8 Embedded Market Participant**

An Embedded Market Participant is a Customer who is registered as a Wholesale Market Participant with the IESO and whose facility is connected to ENWIN's distribution system instead of the IESO-controlled grid.

Embedded Market Participants are responsible for paying all applicable ENWIN charges as approved by the OEB.

Once approved by the IESO, an Embedded Market Participant within ENWIN's service area is required to inform ENWIN in writing of its authorized status 30 days prior to participation in the Ontario electricity market.

If a Customer wishes to de-register with the IESO as a Wholesale Market Participant, the Customer is required to notify ENWIN in writing at least 60 days in advance of de-registration to allow ENWIN sufficient time to make the necessary changes to its billing systems. Concurrently, the Customer is responsible for providing sufficient time for IESO de-registration.

### **3.9 Embedded Distributor**

Any Embedded Distributors within the service jurisdiction of ENWIN are required to inform ENWIN of their status in writing 30 days prior to the supply of electricity. The terms and conditions applicable to the connection of an Embedded Distributor will be included in the Connection Agreement with ENWIN.

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

### **3.10 Unmetered Connections**

ENWIN, at its sole discretion, may provide for new service connections without a meter being installed. These loads would generally be small in size, non-variable, and supply a single device. Examples of services that are considered for unmetered supply include traffic & railway signals, pedestrian cross walks, signals/beacons and other miscellaneous small, fixed loads. ENWIN will not provide a service connection to Customers requesting an unmetered supply connection for an electrical outlet (e.g. receptacle, GFI, and GFCI) installation.

ENWIN may choose to meter the load at any time and for any duration to verify or study typical usage at the Customer's expense. Unmetered Customers cannot allow other parties to use unmetered electrical power from their unmetered service without the written consent of ENWIN. ENWIN reserves the right to retract the option of utilizing an unmetered connection, in which case the Customer shall install provisions for a metered connection at the Customer's expense. ENWIN will provide the Customer 60 days' notice of any decision to change from an unmetered to a metered connection. In addition, if it is deemed to be necessary in ENWIN's sole discretion, ENWIN may convert service connections that are metered to unmetered connections with 60 days' notice to the Customer.

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

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

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

The Customer shall refer to Tables 9.1 and 9.2 in Section 5 of these Conditions of Service which describes the processes (including billing, data updating and validation), rights and obligations between ENWIN and an unmetered load Customer.

The Customer shall construct, at its own expense, the civil infrastructure (including but not limited to poles, underground conduits, tap boxes) on public road allowances or private property that is deemed required by ENWIN to house or support ENWIN's electrical equipment. This civil infrastructure shall be in accordance with ENWIN's current standards, practices, specifications and these Conditions of Service and are subject to inspection and acceptance by ENWIN. After energization, the connection assets between the supply connection and the demarcation point shall be owned and maintained by ENWIN. The Customer is responsible to obtain any required permits or easements for their cable on public rights-of-way or private property and shall present those permissions to ENWIN.

ENWIN will provide, at the Customer's expense, all breakouts of the ENWIN civil infrastructure (i.e. cable chambers, vaults), which may be required to make the service connection. The Customer's service connection equipment shall be able to accept conductors installed by ENWIN. The Customer shall bring its cables to a point determined by ENWIN.

ENWIN shall make all new connections and final disconnections to and from ENWIN's distribution system. The Customer shall pay the applicable connection fees. Where Variable Connection Fees apply, ENWIN shall provide an estimate of the proposed work to the unmetered Customer. In turn, the unmetered Customer shall provide a response to proceed or not with the proposed work to ENWIN within 60 days.

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

Request for payment shall be subject to ENWIN having provided the unmetered Customer with adequate advance notice, prior to effecting the relocation. The unmetered Customer shall respond within two weeks of its intended plan to modify, upgrade, or remove its plant.

ENWIN requires information related to the Customer's loads and locations for each unmetered load. This information provides inputs for the models used to simulate and plan the operation of the distribution system and enables ENWIN to provide notifications for planned outages.

### **3.10.1 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.

In addition to complying with these Conditions of Service, all Street Lighting plant, facilities, or equipment owned by the Customer must comply with all Electrical Safety Authority requirements.

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

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 the Offer to Connect for various Street Lighting Distribution systems.

Prior to energization, ENWIN will require a Connection Authorization from the Electrical Safety Authority. As well, where Street Lighting has been installed by a party other than ENWIN, that party is required to provide ENWIN as-built drawings and specifications of the Street Lighting installation as well as the serial numbers of each fixture, its specification and the pole number to which it is attached prior to ENWIN energizing the Street Lights. As well, ENWIN may perform its own inspection of that Street Lighting equipment.

The Basic Connection is provided by ENWIN at no up-front cost to the City of Windsor. The Basic Connection includes the following:

- 1) Supply and installation of overhead distribution transformation capacity or an equivalent credit for transformation equipment.
- 2) The service voltage will be 120 Volt, single phase, two wire and each application will be established through consultation with ENWIN.
- 3) Up to 30 m of overhead conductor to supply a 100 amp service or an equivalent credit for underground services.
- 4) The service will be unmetered if the energy is being purchased from ENWIN. Energy consumption will be based on the connected wattage and the calculated hours of use.

A Variable Connection charge will be required where the installation costs are beyond those of the Basic Connection. Payment of the Variable Connection cost by the City of Windsor, Developer or Contractor must be completed prior to connection of the service. The following conditions apply:

- 1) For each instance the method and location of supply will be established through consultation with ENWIN.
- 2) An underground feed will be installed by the City of Windsor or ENWIN at the City of Windsor's expense. The City of Windsor is to install their services up to the most

convenient point of service for ENWIN. A circuit breaker can be installed at this point (e.g. pole) as required by code. All underground cable used for this purpose is to be installed in separate duct apart from secondary duct used for other purposes.

3) Where it is necessary to expand the main distribution system, ENWIN will make an Offer to Connect, which will be fair and reasonable, based on ENWIN's design standards and Section 2.1.2 of these Conditions of Service.

### **3.10.2 Traffic & Railway Crossing Signals, Pedestrian Cross Walk Signals/Beacons and Miscellaneous Small Fixed Loads**

The above service types shall be classified as Unmetered Scattered Load Customers. Each unmetered location is reviewed individually and is connected to ENWIN's low voltage distribution system. An Authorization to Connect from the Electrical Safety Authority is required prior to connecting the service.

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

The Ownership Demarcation Point for Customer-owned electrical equipment attached to poles owned by ENWIN is as follows:

- For Overhead Supply - the top of the Customer's service standpipe/mast.
- For Underground Supply - the line side of the Customer's circuit breaker panel on the pole.

The Ownership Demarcation Point for Customer-Owned electrical equipment, which is not attached to ENWIN poles, is at the top of the Customer's service standpipe/mast.

ENWIN may connect new Unmetered Scattered Load Customers using either an overhead or an underground supply. Overhead supply connections fall into two categories:

- 1) The source connection is made at an existing ENWIN supply pole and the service mast is located on the same supply pole; or
- 2) The source connection is made at an existing ENWIN distribution supply pole or line, without any extension of the secondary bus, and the service mast is located within 30 m of the existing pole or lines.

ENWIN will recover the cost of the above two categories of overhead supply connections and for underground supply connections from the Customer as the difference between the total Connection Cost and the Basic Connection cost. Variable Connection costs are

charged for installing assets that go beyond the assets included in the Basic Connection and is recovered on an actual cost basis.

For an underground supply connection, ENWIN will recover the actual costs of the connection from the Customer.

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.

### **3.10.3 Sentinel Lights**

Sentinel Lighting is a service provided by ENWIN Energy, ENWIN's unregulated affiliate company. Terms for provision of service are provided here as a convenience to the Customer. ENWIN is no longer entering into new Sentinel Light agreements but will maintain and may be willing to modify existing agreements.

These devices are leased to the Customer. A Customer may lease a pole and light or a light installed on an existing ENWIN pole. ENWIN owns the distribution system connection equipment for providing the electricity to the Sentinel Light(s).

Sentinel lights may be provided by ENWIN Energy provided that the existing distribution system has capacity to serve the Customer's request for lighting without any expansion or enhancement. The Customer must sign an Agreement to take Sentinel Light service and commit for a minimum two (2) year lease period.

### **3.10.4 Other Loads (<2 kW) - Decorative Lighting and Tree Lighting Services**

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

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

Decorative Lighting and Tree Lighting connected to ENWIN's distribution system shall have the same terms and conditions as outlined in Section 3.10.2 of these Conditions of Service.

## SECTION 4 GLOSSARY OF TERMS

Sources for definitions:

A	<i>Electricity Act, 1998</i> , Schedule A, Section 2, Definitions
MR	IESO Market Rules for the Ontario Electricity Market, Chapter 11, Definitions
DSC	OEB Distribution System Code Definitions
RSC	OEB Retail Settlement Code Definitions
EDL	Electricity Distribution License

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

"Advanced Metering Infrastructure" or "AMI" is an architecture for automated, two-way communication between a smart utility meter and a utility company;

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

"Ancillary services" means services necessary to maintain the reliability of the IESO-controlled grid; including frequency control, voltage control, reactive power and operating reserve services; (MR, 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 ENWIN under which electrical service is requested;

"Bandwidth" means ENWIN'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, DSC)

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

“Capacity Allocation Model” or “CAM” means a model established in accordance with the methodology and requirements set out in Appendix I of the DSC to allocate capacity and costs associated with system expansions to accommodate multiple residential subdivisions and other customer connections in a qualifying development area.

“Competitive electricity services” means those services that are deemed by the OEB to be competitive as set out in Appendix A of the Standard Supply Service Code;

“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 ENWIN in accordance with subsection 2.4 of the Distribution System Code that describes ENWIN’s operating practices and connection rules; (DSC)

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

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

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

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

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

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

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

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

"Disconnection" means a deactivation of connection assets that results in cessation of distribution services to a Consumer; (DSC)

"Distribute", with respect to electricity, means to convey electricity at voltages of 50 kilovolts or less; (A, MR, DSC)

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

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

"Distribution services" means services related to the distribution of electricity and the services the OEB has required distributors to carry out; (RSC, DSC)

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

"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; (DSC)

"Distributor" means a person who owns or operates a distribution system; (A, MR, 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, EDL, DSC)

"Electric Vehicle Supply Equipment" or "EVSE" means equipment as described in Appendix 6 of this Conditions of Service.

"Electrical Safety Authority" or "ESA" means the person or body designated under the *Electricity Act* regulations as the Electrical Safety Authority; (DSC)

“Eligible low-income Customer” means: (a) a residential electricity consumer who has been approved for the Ontario Electricity Support Program, or (b) a residential electricity consumer who has been approved for the Low-Income Energy Assistance Program; (DSC)

“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” means a Generator that owns or operates an embedded generation facility;

“Embedded generation facility” means a generation facility which is not directly connected to the IESO-controlled grid but instead is connected to a distribution system, and has the extended meaning given to it in section 1.9 of the DSC; (DSC)

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

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

“Energy” means the product of power multiplied by time, usually expressed in kilowatt-hours (kWh);

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

“Energy diversion” means the theft or attempted theft of electricity by means of consuming electricity without that electricity being registered through an electricity meter associated to an account of the consumer of that electricity. The amount of the theft may 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 the main distribution system that is made to improve system operating characteristics such as reliability or power quality or to relieve system capacity constraints resulting, for example, from general load growth, but does not include a renewable enabling improvement; (DSC)

“Exempt Distributor” means a distributor referred to in subsection 4.0.1 (1) of Ontario Regulation 161/99 who has an account with a licensed distributor for the provision of electricity that is consumed in at least one eligible residential unit in an eligible complex;

“Expansion” means a modification or addition to the main distribution system in response to one or more requests for one or more additional Customer connections that otherwise could not be made, for example, by increasing the length of the main distribution system,

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

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

"Force Majeure" means any events or causes beyond the reasonable control of ENWIN, including, without limitation, severe weather, flood, fire, lightning, other forces of nature, acts of animals, epidemic, pandemic, 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;

"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, Large Use, Dedicated Transformer Station, Street Lighting, Unmetered Scattered Load or Sentinel Lighting. This includes multi-unit residential establishments such as apartment buildings supplied through one service (bulk-metered);

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

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

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

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

"Host distributor" means the distributor who provides electricity to an embedded distributor; (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;

"IESO-controlled grid" means the transmission systems with respect to which, pursuant to agreements, the IESO has authority to direct operation; (A, 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 distribution system" means a distribution system less the connection assets;

"Main service" refers to ENWIN's incoming cables, bus duct, disconnecting and protective equipment for a building or from which all other metered sub-services are taken;

"Market Participant" has the meaning prescribed in the IESO Market Rules;

"Market Rules" means the rules made under section 32 of the *Electricity Act*; (MR, EDL, 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, generator or Market Participant; (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 unit 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 OEB to be competitive electricity services plus costs for distribution services, other than Standard Supply Service (SSS); (RSC)

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

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

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

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

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

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

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

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

"Plaza" means any building containing two or more commercial business tenants;

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

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

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

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

"Rate" means any rate, charge or other consideration, and includes a penalty for late payment; (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*;

“Reinforcement” means an investment that a distributor makes to increase the distribution system capacity to accommodate new load on the distributor’s distribution system, consistent with the distributor’s planning, design and construction standard;

“Residential Customer” means a Customer that receives “residential service”;

“Residential service” means a 120/240 V single-phase supply to a single family dwelling, duplex, triplex, 4-plex or 6-plex, townhome or multi-unit - individually metered apartment, located on a parcel of land zoned by the City of Windsor Building Department for domestic or household purposes and where the customer uses the dwelling as a home. Where a customer operates an advertised business from a building that may or may not be used as a dwelling, ENWIN may elect to deem that the customer’s rate class will be general service;

“Retail”, with respect to electricity means,

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

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

“Retailer” means a person who retails electricity; (A, MR, 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, EDL, DSC)

“Service date” means the date that the Customer and ENWIN mutually agree upon to begin the supply of electricity by ENWIN;

"Standard Supply Service Code" means the code approved by the Board 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*; (EDL)

"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, etc.;

"Terminal pole" refers to the ENWIN's distribution pole on which the service supply cables are terminated;

"Timed Load Interrupter Device" means a device that will completely interrupt the Customer's electricity intermittently for periods of time and allows full load capacity outside of the time periods that the electricity is interrupted; (DSC)

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

"Totalization" is the process of aggregating, within ENWIN's meter data management system, interval data from two or more interval meters that serve separate delivery points for the purpose of creating a virtual meter point whose peak load is less than the sum of the individual interval meters.

"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, 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, DSC)

"Transmitter" means a person who owns or operates a transmission system; (A, MR, DSC)

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

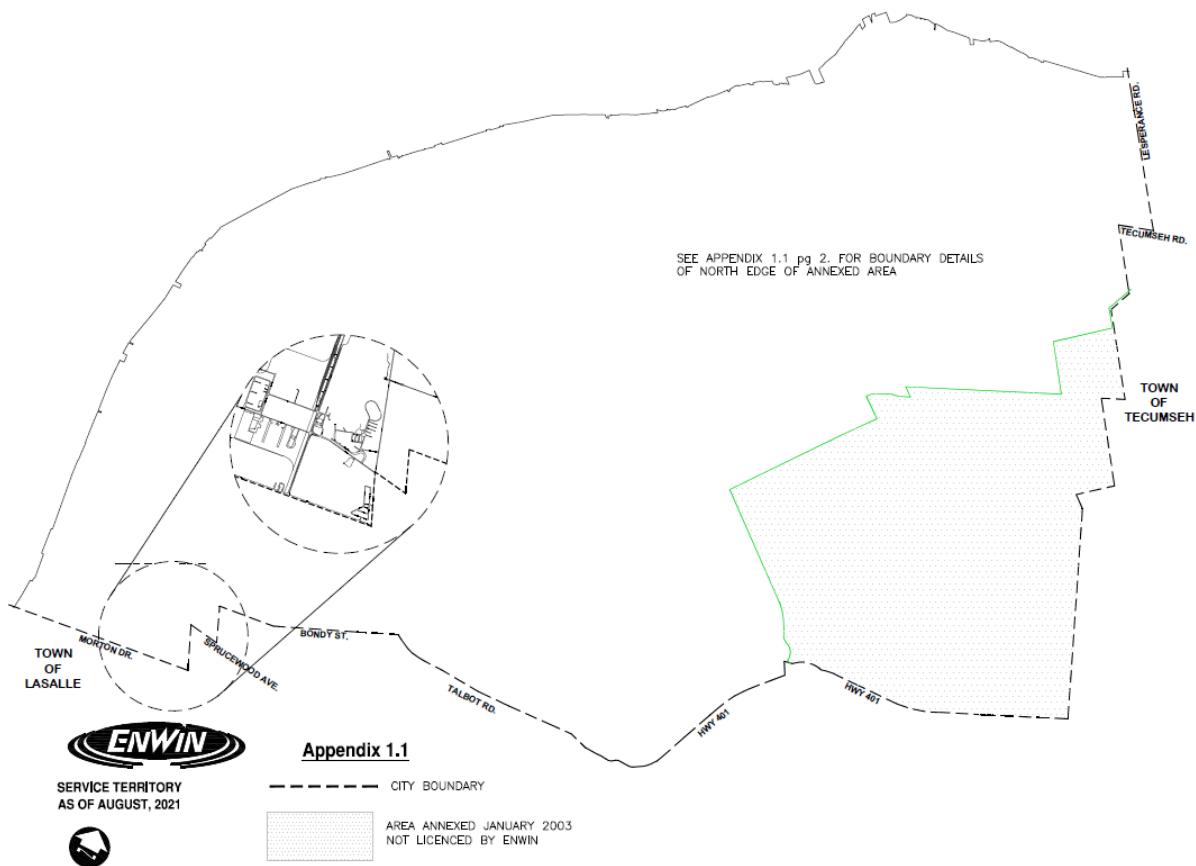
“Unmetered loads” means electricity consumption that is not metered and is billed based on estimated usage; (DSC)

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

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

## SECTION 5 APPENDICES

### Appendix 1.1 – Service Territory Maps





Appendix 1.1 pg. 2



SERVICE TERRITORY  
AS OF AUGUST, 2021



AREA ANNEXED JANUARY 2003  
NOT LICENCED BY ENWIN

CITY BOUNDARY

## Appendix 1.1.1



## Appendix 2 – Provision for Utility Owned Metering

### SINGLE UNIT RESIDENTIAL GUIDE 1 PHASE, 120/240 VOLT SERVICES

TABLE 1

SERVICE CAPACITY	PROVISION FOR UTILITY OWNED METERING METERING SOCKETS AND CABINETS ARE SUPPLIED BY CUSTOMER.  OUTDOOR METER MOUNTING HEIGHT IS 1730mm (5'8") TO CENTER OF METER ± 100mm (4")	PROVISION FOR UTILITY OWNED OVERHEAD SERVICE CONDUCTORS	PROVISION FOR UTILITY OWNED UNDERGROUND SERVICE CONDUCTORS
<b>60<sup>1</sup>–100 AMP</b> (3 WIRE ONLY) <sup>3</sup>	<b>60–100 AMP</b> OVERHEAD SERVICES REQUIRE A MINIMUM 100 AMP RATED STANDARD 4 JAW METER SOCKET INSTALLED OUTDOORS. ALL DISCONNECTING DEVICES TO BE INSTALLED ON THE LOAD SIDE OF THE METER.  UNDERGROUND SERVICES REQUIRE A MINIMUM 200 AMP RATED, HEAVY DUTY, STUD STYLE 4 JAW METER SOCKET INSTALLED OUTDOORS.	SECONDARY CLEVIS OR RACK REQUIRED.  AERIAL SERVICES SUPPLIED BY ENWIN WILL HAVE MAXIMUM TENSIONS AS FOLLOWS:  TRIPLEX SERVICE–400kg (900 LBS.)  OPEN WIRE SECONDARY SERVICES UP TO 400 AMP –272kg (600 LBS.)/COND.	CUSTOMER MAY REQUEST THAT ENWIN INSTALL AN UNDERGROUND SERVICE FROM ENWIN'S DESIGNATED POINT OF SUPPLY FROM EITHER AN OVERHEAD OR UNDERGROUND SYSTEM TO THE CUSTOMER'S FIRST POINT OF CONNECTION.  <b>UP TO 200 AMP</b> ENWIN WILL INSTALL, OWN AND MAINTAIN SECONDARY CABLES TO NEUTRAL AND LINE SIDE STUDS OF OUTDOOR METERING SOCKET.  <b>201–400 AMP</b>  ENWIN WILL INSTALL, OWN AND MAINTAIN PARALLEL SECONDARY CABLES TO NEUTRAL AND LINE SIDE STUDS OF OUTDOOR METERING SOCKET.
<b>101–200 AMP</b>	<b>101–200 AMP</b>  OVERHEAD SERVICES REQUIRE A MINIMUM 200 AMP RATED STANDARD 4 JAW METER SOCKET INSTALLED OUTDOORS. ALL DISCONNECTING DEVICES TO BE INSTALLED ON THE LOAD SIDE OF THE METER.  UNDERGROUND SERVICES REQUIRE A MINIMUM 200 AMP RATED, HEAVY DUTY, STUD STYLE 4 JAW METER SOCKET INSTALLED OUTDOORS.		
<b>201–400 AMP<sup>3</sup></b>  MAXIMUM ALLOWABLE SERVICE IS 400 AMPERES	<b>201–400 AMP</b>  APPROVED TRANSFORMER RATED METER SOCKET, INSTALLED OUTDOORS. ALL DISCONNECTING DEVICES TO BE INSTALLED ON THE LOAD SIDE OF THE METER.		

1: MINIMUM 60 AMP SERVICES ARE ONLY PERMITTED AT THE DISCRETION OF THE SERVICE SPOTTER WITH RESPECT TO LOAD AND LIVING AREAS AS OUTLINED IN RULE 8–200 OF THE ELECTRICAL SAFETY CODE.

2: FOR ACCEPTABLE LINE/LOAD CABINET CONNECTIONS REFER TO ENWIN METERING STANDARD M.0.0.0.0.0.A—"ACCEPTABLE LINE/LOAD LOCATIONS ON METERING CABINETS". METERING CABINET MUST HAVE MANUFACTURED FIXED BACKPLATE MOUNTING STUDS.

3: THE NUMBER OF CONDUCTORS PER PHASE, CONDUCTOR TYPE/SIZE AND METER CABINET CONFIGURATION CAN IMPACT WHICH TYPE OF CURRENT TRANSFORMERS WILL BE USED (BAR, DONUT, WINDOW, ETC.). CONSULT WITH ENWIN METERING DEPARTMENT BEFORE PROCEEDING WITH INSTALLATION OF EQUIPMENT.

ISSUED	REVISION HISTORY	PRP:	CHK:	APP:	TITLE		
PRP: –	REV: DATE: TECH: **INSERT NOTES HERE**				SINGLE UNIT RESIDENTIAL GUIDE 1 PHASE, 120/240 VOLT SERVICES		
CHK: –							
APP: SB P.Eng							
DATE: 01–APR–2024	REV:1 DATE: 01–APR–2024 TECH: KSL	JH	KSL	SB			
SCALE: NTS	REVISED NOTES						
	REV:0 DATE: 08–2022 TECH: KS	JH	KS	SB	STD. DWG. NO. M.1.0.0.0.0.T–001	1 OF 1	1
	NEW STANDARD						

MULTI-UNIT RESIDENTIAL, GUIDE (BULK METERING)  
1 PHASE, 120/240 VOLT SERVICES

TABLE 2

INDIVIDUAL SERVICE CAPACITY	PROVISION FOR UTILITY OWNED METERING METERING SOCKETS AND CABINETS ARE SUPPLIED BY CUSTOMER.  OUTDOOR METER MOUNTING HEIGHT IS 1730mm (5'8") TO CENTER OF METER ± 100mm (4")	PROVISION FOR UTILITY OWNED OVERHEAD SERVICE CONDUCTORS	PROVISION FOR UTILITY OWNED UNDERGROUND SERVICE CONDUCTORS
<b>100-200 AMP</b> MINIMUM 100 AMP (3 WIRE ONLY)	<b>100-200 AMP</b>  METER SOCKET (4 JAW) INSTALLED OUTDOORS SUITABLE FOR EITHER OVERHEAD OR UNDERGROUND SUPPLY. ALL DISCONNECTING DEVICES TO BE INSTALLED ON THE LOAD SIDE OF THE METER.	SECONDARY CLEVIS OR RACK REQUIRED.  AERIAL SERVICES SUPPLIED BY ENWIN WILL HAVE MAXIMUM TENSIONS AS FOLLOWS:  TRIPLEX SERVICE-400kg (900 LBS.)  OPEN WIRE SECONDARY SERVICES UP TO 400 AMP-272kg (600 LBS.)/COND.	CUSTOMER MAY REQUEST THAT ENWIN INSTALL AN UNDERGROUND SERVICE FROM ENWIN'S DESIGNATED POINT OF SUPPLY FROM EITHER AN OVERHEAD OR UNDERGROUND SYSTEM TO THE CUSTOMER'S FIRST POINT OF CONNECTION.  <b>100 - 200 AMP</b>  ENWIN WILL INSTALL, OWN AND MAINTAIN SECONDARY CABLES TO NEUTRAL AND LINE SIDE STUDS OF OUTDOOR METERING SOCKET.
<b>201-400 AMP<sup>3</sup></b>	<b>201-400 AMP</b>  910mm x 910mm x 250mm (36" x 36" x 10") METER CABINET, INSTALLED INDOORS ON LOAD SIDE OF MAIN SERVICE SWITCH. <sup>1</sup> OR AN APPROVED TRANSFORMER RATED METER SOCKET, INSTALLED OUTDOORS.	OPEN WIRE SECONDARY SERVICES OVER 400 AMP-450kg (1000LBS.)/COND.	<b>201-400 AMP</b>  ENWIN WILL INSTALL, OWN AND MAINTAIN PARALLEL SECONDARY CABLES TO NEUTRAL AND LINE SIDE LUGS OF INDOOR MAIN DISCONNECT.  <b>OVER 400 AMP</b>  ENWIN WILL INSTALL, OWN AND MAINTAIN UNDERGROUND SECONDARY CABLES UP TO DEMARCATON POINT. <sup>2</sup>
<b>OVER 400 AMP</b> (MAXIMUM LOAD PROVIDED AT THIS VOLTAGE IS 167kVA)	<b>OVER 400 AMP</b>  1220mm x 1220mm x 300mm (48" x 48" x 12") METER CABINET, INSTALLED INDOORS ON LOAD SIDE OF MAIN SERVICE SWITCH. <sup>1</sup>		

**IMPORTANT:** FOR BILLING PURPOSES, ALL MULTI-UNIT RESIDENTIAL BUILDINGS WITH BULK METER ARE CLASSIFIED AS GENERAL SERVICES UNDER THE RESPECTIVE OWNER/LANDLORD.

- 1: CABINET HEIGHT 1980mm ± 150mm (78" ± 6") FROM THE FINISHED FLOOR TO THE TOP OF THE METER CABINET. FOR ACCEPTABLE LINE/LOAD CABINET CONNECTIONS REFER TO ENWIN METERING STANDARD M.0.0.0.0.0.A—"ACCEPTABLE LINE/LOAD LOCATIONS ON METERING CABINETS. METERING CABINET MUST HAVE MANUFACTURED FIXED BACKPLATE MOUNTING STUDS.
- 2: CONNECTION OF ENWIN CONDUCTORS TO CUSTOMER OWNED CABLES AT THE PROPERTY LINE WILL BE MADE IN A SUITABLE HANDHOLE (SUPPLIED AND INSTALLED BY ENWIN. ENWIN WILL DETERMINE MOST FEASIBLE CONNECTION WITH RESPECT TO DISTRIBUTION AND LOCATION).
- 3: THE NUMBER OF CONDUCTORS PER PHASE, CONDUCTOR TYPE/SIZE AND METER CABINET CONFIGURATION CAN IMPACT WHICH TYPE OF CURRENT TRANSFORMERS WILL BE USED (BAR, DONUT, WINDOW, ETC.). CONSULT WITH ENWIN METERING DEPARTMENT BEFORE PROCEEDING WITH INSTALLATION OF EQUIPMENT.

ISSUED	REVISION HISTORY	PRP:	CHK:	APP:	TITLE
PRP: -	REV: DATE: TECH: **INSERT NOTES HERE**				MULTI-UNIT RESIDENTIAL GUIDE (BULK METERING)
CHK: -					1 PHASE, 120/240 VOLT SERVICES
APP: SB P.Eng					
DATE: 18-04-2023	REV: 1 DATE: 01-APR-2024 TECH: KSL	JH	KSL	SB	
SCALE: NTS	REVISED NOTES				
	REV: 0 DATE: 08-2022 TECH: KS	JH	KS	SB	STD. DWG. NO. 1 REV: M.1.0.0.0.0.T-002 1 OF 1
	NEW STANDARD				

**RESIDENTIAL GUIDE FOR MULTI-METERING NOT EXCEEDING 4 UNITS  
1 PHASE, 120/240 VOLT SERVICES**

**TABLE 3**

NUMBER OF INDIVIDUALLY METERED UNITS AND INDIVIDUAL SERVICE CAPACITY	PROVISION FOR METERING METERING SOCKETS ARE SUPPLIED BY CUSTOMER	PROVISION FOR UTILITY OWNED OVERHEAD SERVICE CONDUCTORS	PROVISION FOR UTILITY OWNED UNDERGROUND SERVICE CONDUCTORS
<b>ALL NEW INSTALLATIONS</b>			
2 – 4 DWELLING UNITS  MINIMUM SERVICE CAPACITY IS 60 AMP PER UNIT <sup>1</sup>	<p>MULTIPLE SERVICES UP TO 200 AMP PER SERVICE INDIVIDUAL 4 JAW SOCKETS GROUPED OUTDOORS SUITABLE FOR EITHER OVERHEAD OR UNDERGROUND SUPPLY. ALL DISCONNECTING DEVICES TO BE INSTALLED ON THE LOAD SIDE OF THE METER. OUTDOOR MOUNTING HEIGHT IS 1730mm (5'8") TO CENTER OF METER <math>\pm</math> 100mm (4"). ALL DISCONNECTING DEVICES REQUIRE A LOCKING HASP TO EFFECTIVELY LOCK THE DEVICE IN THE OFF POSITION.</p> <p>201 TO 400 AMP SERVICE USING INDOOR MAIN DISCONNECT INDIVIDUAL 4 JAW SOCKETS GROUPED INDOORS, INSTALLED ON LINE SIDE OF INDIVIDUAL UNIT SERVICE SWITCHES – NORMALLY OFF SPLITTER. INDOOR METER MOUNTING HEIGHT IS MINIMUM 1370mm (4'6") TO CENTER OF METER. MAXIMUM 1830mm (6'0") TO CENTER OF METER.</p>	<p>SECONDARY CLEVIS OR RACK REQUIRED.</p> <p>AERIAL SERVICES SUPPLIED BY ENWIN WILL HAVE MAXIMUM TENSIONS AS FOLLOWS:</p> <p>TRIPLEX SERVICE – 400kg (900 LBS.)</p> <p>OPEN WIRE SECONDARY SERVICES UP TO 400 AMP – 272kg (600 LBS.)/COND.</p>	<p>CUSTOMER MAY REQUEST THAT ENWIN INSTALL AN UNDERGROUND SERVICE FROM ENWIN'S DESIGNATED POINT OF SUPPLY FROM EITHER AN OVERHEAD OR UNDERGROUND SYSTEM TO THE CUSTOMER'S FIRST POINT OF CONNECTION.</p> <p><b>MULTIPLE SERVICES UP TO 200 AMP PER SERVICE</b></p> <p>ENWIN WILL INSTALL, OWN AND MAINTAIN SECONDARY CABLES TO NEUTRAL AND LINE SIDE STUDS OF OUTDOOR METERING SOCKET.</p> <p><b>201–400 AMP SERVICES USING INDOOR MAIN DISCONNECT</b></p> <p>ENWIN WILL INSTALL, OWN AND MAINTAIN PARALLEL SECONDARY CABLES TO NEUTRAL AND LINE SIDE LUGS OF INDOOR MAIN DISCONNECT.</p>
<b>ALL EXISTING CONDITIONS</b>			
NUMBER OF EXISTING UNITS MAY VARY  EXISTING SERVICES MAY VARY FROM 60, 100, 200, 400 OR 600 AMP (BULK METERED SERVICES) OR ANY COMBINATION OF EITHER.	<p>ALL ADDITIONAL INDIVIDUAL 4 JAW METER SOCKETS SUITABLE FOR EITHER OVERHEAD OR UNDERGROUND SUPPLY, WILL BE GROUPED NEXT TO EXISTING METER SOCKETS. – OUTDOOR LOCATION IS PREFERRED WHERE FEASIBLE.<sup>2</sup></p> <p>INDOOR METER MOUNTING HEIGHT IS MINIMUM 1370mm (4'6") TO CENTER OF METER. MAXIMUM 1830mm (6'0") TO CENTER OF METER. OUTDOOR METER MOUNTING HEIGHT IS 1730mm (5'8") TO CENTER OF METER <math>\pm</math> 100mm (4").<sup>3</sup></p>		

1: MINIMUM 60 AMP SERVICES ARE ONLY PERMITTED AT THE DISCRETION OF THE SERVICE SPOTTER WITH RESPECT TO LOAD AND LIVING AREAS AS OUTLINED IN RULE 8–200 OF THE ELECTRICAL SAFETY CODE.

2: METER AND SERVICE LOCATION MUST BE CONFIRMED BY THE SERVICE SPOTTER PRIOR TO INSTALLATION.

3: WHEN CONVERTING FROM AN EXISTING BULK METERED SERVICE TO INDIVIDUAL METERING, ALL METERS WILL BE GROUPED INDOORS OFF SPLITTER.

ISSUED	REVISION HISTORY	PRP:	CHK:	APP:	TITLE
PRP: – CHK: – APP: SB P.Eng DATE: 01–APR–2024 SCALE: NTS	REV: DATE: TECH: **INSERT NOTES HERE**				RESIDENTIAL GUIDE FOR MULTI–METERING NOT EXCEEDING 4 UNITS 1 PHASE, 120/240 VOLT SERVICES
	REV: 1 DATE: 01–APR–2024 TECH: KSL REVISED NOTES	JH	KSL	SB	
	REV: 0 DATE: 08–2022 TECH: KS NEW STANDARD	JH	KS	SB	STD. DWG. NO. M.1.0.0.0.0.T–003 1 OF 1

MULTI-UNIT RESIDENTIAL GUIDE-MULTI-METERING TO 5 OR MORE UNITS  
1 PHASE, 120/240 VOLT SERVICES

TABLE 4

NUMBER OF INDIVIDUALLY METERED UNITS AND INDIVIDUAL SERVICE CAPACITY	PROVISION FOR METERING  METERING SOCKETS ARE SUPPLIED BY CUSTOMER	PROVISION FOR UTILITY OWNED OVERHEAD SERVICE CONDUCTORS	PROVISION FOR UTILITY OWNED UNDERGROUND SERVICE CONDUCTORS
<b>ALL NEW INSTALLATIONS</b>			
5 OR MORE DWELLING UNITS  MINIMUM 400 AMP 3 WIRE SERVICE  OVER 400 AMP (MAXIMUM LOAD PROVIDED AT THIS VOLTAGE IS 167kVA).	INDIVIDUAL 4 JAW SOCKETS GROUPED INDOORS, INSTALLED ON LINE SIDE OF INDIVIDUAL UNIT SERVICE SWITCHES - NORMALLY OFF SPLITTER. INDOOR METER MOUNTING HEIGHT IS MINIMUM 1370mm (4'6") TO CENTER OF METER. MAXIMUM 1830MM (6'0") TO CENTER OF METER.  THE OWNER(S) OF A PREMISE INSTALLING INDIVIDUAL RESIDENTIAL METERING EXCEEDING FOUR (4) MAY BE REQUIRED TO ENTER INTO MULTI-METERING AGREEMENT WITH ENWIN.  PERMISSION FOR OUTDOOR METER INSTALLATIONS MAY BE GRANTED BY ENWIN, ON A CASE-BY-CASE BASIS.	SECONDARY CLEVIS OR RACK REQUIRED.  AERIAL SERVICES SUPPLIED BY ENWIN WILL HAVE MAXIMUM TENSIONS AS FOLLOWS:  TRIPLEX SERVICE-400kg (900 LBS.)  OPEN WIRE SECONDARY SERVICES UP TO 400 AMP -272kg (600 LBS.)/COND.  OPEN WIRE SECONDARY SERVICES OVER 400 AMP-450kg (1000lbs.)/COND.	CUSTOMER MAY REQUEST THAT ENWIN INSTALL AN UNDERGROUND SERVICE FROM ENWIN'S DESIGNATED POINT OF SUPPLY FROM EITHER AN OVERHEAD OR UNDERGROUND SYSTEM TO THE CUSTOMER'S FIRST POINT OF CONNECTION.  <b>MULTIPLE SERVICES UP TO 200 AMP PER SERVICE (EXISTING CONDITIONS ONLY)</b>  ENWIN WILL INSTALL, OWN AND MAINTAIN SECONDARY CABLES TO NEUTRAL AND LINE SIDE STUDS OF OUTDOOR METERING SOCKET.  <b>400 AMP SERVICES USING INDOOR MAIN DISCONNECT</b>  ENWIN WILL INSTALL, OWN AND MAINTAIN PARALLEL SECONDARY CABLES TO NEUTRAL AND LINE SIDE LUGS OF INDOOR MAIN DISCONNECT.  <b>OVER 400 AMP</b>  ENWIN INSTALL, OWN AND MAINTAIN UNDERGROUND SECONDARY CABLES UP TO DEMARCTION POINT. <sup>2</sup>
<b>ALL EXISTING CONDITIONS</b>			
NUMBER OF EXISTING UNITS MAY VARY  EXISTING SERVICES MAY VARY FROM 60, 100, 200, 400 OR 600 AMP OR ANY COMBINATION OF EITHER (BULK METERED SERVICES)	ALL ADDITIONAL INDIVIDUAL 4 JAW METER SOCKETS, INSTALLED ON LINE SIDE OF INDIVIDUAL UNIT SERVICE SWITCHES SUITABLE FOR EITHER OVERHEAD OR UNDERGROUND SUPPLY, WILL BE GROUPED NEXT TO EXISTING SOCKETS. <sup>1</sup>  INDOOR METER MOUNTING HEIGHT IS MINIMUM 1370 MM (4 FT. 6 IN.) TO CENTER OF METER. MAXIMUM 1830 MM (6 FT. 0 IN.) TO CENTER OF METER. OUTDOOR METER MOUNTING HEIGHT IS 1730 MM (5 FT. 8 IN.) TO CENTER OF METER $\pm$ 100 MM (4 IN.).  ALL DISCONNECTING DEVICES REQUIRE A LOCKING HASP TO EFFECTIVELY LOCK THE DEVICE IN THE OFF POSITION.		

1: METER AND SERVICE LOCATION MUST BE CONFIRMED BY THE SERVICE SPOTTER PRIOR TO INSTALLATION.

2: CONNECTION OF ENWIN CONDUCTORS TO CUSTOMER OWNED CABLES AT THE PROPERTY LINE WILL BE MADE IN A SUITABLE HANDHOLE (SUPPLIED AND INSTALLED BY ENWIN). ENWIN WILL DETERMINE MOST FEASIBLE CONNECTION WITH RESPECT TO DISTRIBUTION AND LOCATION.

ISSUED	REVISION HISTORY	PRP:	CHK:	APP:	TITLE
PRP: — CHK: — APP: SB P.Eng DATE: 01-APR-2024 SCALE: NTS	REV: DATE: TECH: **INSERT NOTES HERE**				MULTI-UNIT RESIDENTIAL GUIDE-MULTI-METERING TO 5 OR MORE UNITS 1 PHASE, 120/240 VOLT SERVICES
	REV: 1 DATE: 01-APR-2024 TECH: KSL REVISED NOTES	JH	KSL	SB	
	REV: 0 DATE: 08-2022 TECH: KS NEW STANDARD	JH	KS	SB	STD. DWG. NO. M.1.0.0.0.0.T-004 REV: 1 OF 1

SINGLE AND MULTI-UNIT COMMERCIAL GUIDE  
1 PHASE, 120/240 VOLT SERVICES

TABLE 5

INDIVIDUAL SERVICE CAPACITY	PROVISION FOR UTILITY OWNED METERING  METERING SOCKETS AND CABINETS ARE SUPPLIED BY CUSTOMER	PROVISION FOR UTILITY OWNED OVERHEAD SERVICE CONDUCTORS	PROVISION FOR UTILITY OWNED UNDERGROUND SERVICE CONDUCTORS
<b>0-200 AMP</b>  3 WIRE OUTDOOR COMMERCIAL ELECTRICAL INFRASTRUCTURE SERVICES  SERVICES FOR TRAFFIC SIGNALS, TELEPHONE BOOTHS, BUS SHELTERS AND OTHER SMALL SERVICES NOT METERED.	<b>0-200 AMP</b>  4 JAW METER SOCKET, INSTALLED ON LINE SIDE OF INDIVIDUAL UNIT SERVICE SWITCHES SUITABLE FOR EITHER OVERHEAD OR UNDERGROUND SUPPLY.  INDOORS IN COMMERCIAL AREAS MINIMUM 1370mm (4ft. 6in.) TO CENTER OF METER. MAXIMUM 1830mm (6ft. 0in.) TO CENTER OF METER.  OUTDOORS IN RESIDENTIAL AREAS OR WHERE INDOOR LOCATION NOT ACCESSIBLE. <sup>2</sup>  OUTDOOR HEIGHT IS 1730mm (5ft. 8in.) TO CENTER OF METER $\pm$ 100mm (4in.).	SECONDARY CLEVIS OR RACK REQUIRED.  AERIAL SERVICES SUPPLIED BY ENWIN WILL HAVE MAXIMUM TENSIONS AS FOLLOWS:  TRIPLEX SERVICE-400kg (900 LBS.)  OPEN WIRE SECONDARY SERVICES UP TO 400 AMP-272kg (600 LBS.)/COND.  OPEN WIRE SECONDARY SERVICES OVER 400 AMP-450kg (1000LBS.)/COND.	CUSTOMER - OWNED UNDERGROUND SERVICES ARE NORMALLY TERMINATED ON POLES OWNED AND INSTALLED BY THE CUSTOMER. THE LOCATION OF THESE POLES MUST BE SATISFACTORY TO ENWIN.  WHERE THE CUSTOMER REQUESTS TO TERMINATE ON A UTILITY POLE PERMISSION MUST BE OBTAINED FROM ENWIN. (NOT EXCEEDING 200 AMPS). CORFLEX (OR SIMILAR) CABLE WILL NOT BE ACCEPTED.  IN AREAS OF UNDERGROUND DISTRIBUTION, ENWIN WILL INSTALL, OWN AND MAINTAIN UNDERGROUND SECONDARY CABLES UP TO THE DEMARCTION POINT.
<b>201-400 AMP<sup>3</sup></b>	<b>201-400 AMP</b>  910mm x 910mm x 250mm (36" x 36" x 10") METER CABINET INSTALLED INDOORS ON LOAD SIDE OF MAIN SERVICE SWITCH. <sup>1</sup> AN "A" BASE METER WILL BE INSTALLED INSIDE IT CABINET.		
<b>OVER 400 AMP</b>  (MAXIMUM LOAD PROVIDED AT THIS VOLTAGE IS 167KVA)	<b>OVER 400 AMP</b>  1220mm x 1220mm x 300mm (48" x 48" x 12") METER CABINET INSTALLED INDOORS ON LOAD SIDE OF MAIN SERVICE SWITCH. <sup>1</sup> AN "A" BASE METER WILL BE INSTALLED INSIDE IT CABINET.		

SWITCHGEAR: METERING WITH SWITCHGEAR - REFER TO CONTRACTOR INFORMATION FOR THE INSTALLATION OF PADMOUNT TRANSFORMERS (METERING). METERED SERVICES FOR BILLBOARDS AND COMMERCIAL SIGNS - REFER TO ENWIN CONDITIONS OF SERVICE SECTION 3.2. UNMETERED TRAFFIC SIGNALS, TELEPHONE BOOTHS, BUS SHELTERS AND OTHERS - REFER TO ENWIN CONDITIONS OF SERVICE SECTION 3.8.

- 1: FOR ACCEPTABLE LINE/LOAD CABINET CONNECTIONS REFER TO ENWIN METERING STANDARD M.0.0.0.0.0.A - "ACCEPTABLE LINE/LOAD LOCATIONS ON METERING CABINETS". METERING CABINET MUST HAVE MANUFACTURED FIXED BACK PLATE MOUNTING STUDS. CABINET HEIGHT 1980mm  $\pm$  150mm (78"  $\pm$  6") FROM THE FINISHED FLOOR TO THE TOP OF THE METER CABINET.
- 2: METER LOCATION AT THE DISCRETION OF THE SERVICE SPOTTER.
- 3: THE NUMBER OF CONDUCTORS PER PHASE, CONDUCTOR TYPE/SIZE, AND METER CABINET CONFIGURATION CAN IMPACT WHICH TYPE OF CURRENT TRANSFORMERS WILL BE USED (BAR, DONUT, WINDOW, ETC.). CONSULT ENWIN DEPARTMENT BEFORE PROCEEDING WITH INSTALLATION OF EQUIPMENT.

ISSUED		REVISION HISTORY		PRP:	CHK:	APP:	TITLE		
PRP:	-	REV: DATE: TECH: **INSERT NOTES HERE**					SINGLE AND MULTI-UNIT COMMERCIAL GUIDE 1 PHASE, 120/240 VOLT SERVICES		
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SCALE:	NTS								
		REV:0 DATE: 08-2022 TECH: KS NEW STANDARD			JH	KS	SB	STD. DWG. NO. M.1.0.0.0.0.T-005	1 REV: 1 OF 1

THREE PHASE, 4 WIRE 208Y/120 VOLT GUIDE  
3 PHASE, 208Y/120V VOLT SERVICES

TABLE 6

INDIVIDUAL SERVICE CAPACITY	PROVISION FOR UTILITY OWNED METERING  METERING SOCKETS AND CABINETS ARE SUPPLIED BY CUSTOMER.	PROVISION FOR UTILITY OWNED OVERHEAD SERVICE CONDUCTORS	PROVISION FOR UTILITY OWNED UNDERGROUND SERVICE CONDUCTORS
<b>0-200 amp</b>	7 – JAW METER SOCKET. LOCATED INDOORS ON LOAD SIDE OF MAIN DISCONNECT	SECONDARY CLEVIS OR RACK REQUIRED.  AERIAL SERVICES SUPPLIED BY ENWIN WILL HAVE MAXIMUM TENSIONS AS FOLLOWS:	CUSTOMER – OWNED UNDERGROUND SERVICES ARE NORMALLY TERMINATED ON POLES OWNED AND INSTALLED BY THE CUSTOMER. THE LOCATION OF THESE POLES MUST BE SATISFACTORY TO ENWIN.
<b>201-400 amp<sup>2</sup></b>	1220mm x 1200mm x 300mm (48" x 48" x 12") METER CABINET <sup>1</sup>	TRIPLEX SERVICE – 400kg (900 LBS.)  OPEN WIRE SECONDARY SERVICES UP TO 400 amp – 272kg (600 LBS.)/COND.	WHERE THE CUSTOMER REQUESTS TO TERMINATE ON A UTILITY POLE PERMISSION MUST BE OBTAINED FROM ENWIN. (NOT EXCEEDING 200 AMPS). CORFLEX (OR SIMILAR) CABLE WILL NOT BE ACCEPTED.
<b>401-800 amp</b>	1220mm x 1220mm x 300mm (48" x 48" x 12") METER CABINET <sup>1</sup>	OPEN WIRE SECONDARY SERVICES OVER 400 amp – 450kg (1000LBS.)/COND.	IN AREAS OF UNDERGROUND DISTRIBUTION, ENWIN WILL INSTALL, OWN AND MAINTAIN UNDERGROUND SECONDARY CABLES UP TO THE DEMARCACTION POINT.
<b>OVER 800 amp</b>	SWITCHGEAR – CONSULT ENWIN		

SWITCHGEAR: METERING WITH SWITCHGEAR – REFER TO CONTRACTOR INFORMATION FOR THE INSTALLATION OF PADMOUNT TRANSFORMERS (METERING). 5 JAW SOCKET REQUIRED WHEN USING ONLY 2 LINE (HOT) CONDUCTORS AND 1 NEUTRAL CONDUCTOR FOR SERVICE FROM A 3 PHASE, 4 WIRE SYSTEM. (IE. MULTI-METERED APARTMENT BUILDING).

- 1: FOR ACCEPTABLE LINE/LOAD CABINET CONNECTIONS REFER TO ENWIN METERING STANDARD M.0.0.0.0.0.A – "ACCEPTABLE LINE/LOAD LOCATIONS ON METERING CABINETS". METERING CABINET MUST HAVE MANUFACTURED FIXED BACK PLATE MOUNTING STUDS. CABINET HEIGHT 1980mm ± 150mm (78" ± 6") FROM THE FINISHED FLOOR TO THE TOP OF THE METER CABINET.
- 2: THE NUMBER OF CONDUCTORS PER PHASE, CONDUCTOR TYPE/SIZE, AND METER CABINET CONFIGURATION CAN IMPACT WHICH TYPE OF CURRENT TRANSFORMERS WILL BE USED (BAR, DONUT, WINDOW, ETC.). CONSULT ENWIN METERING DEPARTMENT BEFORE PROCEEDING WITH INSTALLATION OF EQUIPMENT.

ISSUED		REVISION HISTORY		PRP:	CHK:	APP:	TITLE		
PRP:	–	REV:	DATE:	TECH:					
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APP:	SB P.Eng								
DATE:	01-APR-2024	REV: 1	DATE: 01-APR-2024	TECH: KSL	JH	KSL	SB	THREE PHASE, 4 WIRE 208Y/120 VOLT GUIDE	
SCALE:	NTS	REVISED NOTES						3 PHASE, 208Y/120 VOLT SERVICES	
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			NEW STANDARD					M.1.0.0.0.0.T-006	1

THREE PHASE, 4 WIRE 600Y/347 VOLT GUIDE  
3 PHASE, 600Y/347V VOLT SERVICES

TABLE 7

INDIVIDUAL SERVICE CAPACITY	PROVISION FOR UTILITY OWNED METERING METERING SOCKETS AND CABINETS ARE SUPPLIED BY CUSTOMER ON LOAD SIDE OF MAIN DISCONNECT.  MINIMUM 1370mm (4'6") CENTER OF METER. MAXIMUM 1830mm (6'0") TO CENTER OF METER.	PROVISION FOR UTILITY OWNED OVERHEAD SERVICE CONDUCTORS	PROVISION FOR UTILITY OWNED UNDERGROUND SERVICE CONDUCTORS
<b>0-200 AMP</b>	7 – JAW METER SOCKET. LOCATED INDOORS ON LOAD SIDE OF MAIN DISCONNECT	SECONDARY CLEVIS OR RACK REQUIRED.  AERIAL SERVICES SUPPLIED BY ENWIN WILL HAVE MAXIMUM TENSIONS AS FOLLOWS:  TRIPLEX SERVICE – 400kg (900 LBS.)	CUSTOMER – OWNED UNDERGROUND SERVICES ARE NORMALLY TERMINATED ON POLES OWNED AND INSTALLED BY THE CUSTOMER. THE LOCATION OF THESE POLES MUST BE SATISFACTORY TO ENWIN.
<b>201-400 AMP<sup>2</sup></b>	1220mm x 1200mm x 300mm (48" x 48" x 12") METER CABINET. <sup>1</sup>	OPEN WIRE SECONDARY SERVICES UP TO 400 AMP – 272kg (600 LBS.)/COND.	WHERE THE CUSTOMER REQUESTS TO TERMINATE ON A UTILITY POLE PERMISSION MUST BE OBTAINED FROM ENWIN. (NOT EXCEEDING 200 AMPS).  CORFLEX (OR SIMILAR) CABLE WILL NOT BE ACCEPTED.
<b>401-800 AMP</b>	1220mm x 1220mm x 300mm (48" x 48" x 12") METER CABINET. <sup>1</sup>	OPEN WIRE SECONDARY SERVICES OVER 400 AMP – 450kg (1000LBS.)/COND.	IN AREAS OF UNDERGROUND DISTRIBUTION, ENWIN WILL INSTALL, OWN AND MAINTAIN UNDERGROUND SECONDARY CABLES UP TO THE DEMARCACTION POINT.
<b>OVER 800 AMP</b>	SWITCHGEAR – CONSULT ENWIN.		

SWITCHGEAR: METERING WITH SWITCHGEAR – REFER TO CONTRACTOR INFORMATION FOR THE INSTALLATION OF PADMOUNT TRANSFORMERS (METERING). 5 JAW SOCKET REQUIRED WHEN USING ONLY 2 LINE (HOT) CONDUCTORS AND 1 NEUTRAL CONDUCTOR FOR SERVICE FROM A 3 PHASE, 4 WIRE SYSTEM. (IE. MULTI-METERED APARTMENT BUILDING).

1: FOR ACCEPTABLE LINE/LOAD CABINET CONNECTIONS REFER TO ENWIN METERING STANDARD M.0.0.0.0.0.A – "ACCEPTABLE LINE/LOAD LOCATIONS ON METERING CABINETS". METERING CABINET MUST HAVE MANUFACTURED FIXED BACK PLATE MOUNTING STUDS. CABINET HEIGHT 1980mm ± 150mm (78" ± 6") FROM THE FINISHED FLOOR TO THE TOP OF THE METER CABINET.

2: THE NUMBER OF CONDUCTORS PER PHASE, CONDUCTOR TYPE/SIZE, AND METER CABINET CONFIGURATION CAN IMPACT WHICH TYPE OF CURRENT TRANSFORMERS WILL BE USED (BAR, DONUT, WINDOW, ETC.). CONSULT ENWIN METERING DEPARTMENT BEFORE PROCEEDING WITH INSTALLATION OF EQUIPMENT.

ISSUED	REVISION HISTORY	PRP:	CHK:	APP:	TITLE
PRP: –	REV: DATE: TECH: **INSERT NOTES HERE**				THREE PHASE, 4 WIRE 600Y/347 VOLT GUIDE
CHK: –					3 PHASE, 600Y/347 VOLT SERVICES
APP: SB P.Eng					
DATE: 01-APR-2024	REV: 1 DATE: 01-APR-2024 TECH: KSL	JH	KSL	SB	
SCALE: NTS	REVISED NOTES				
	REV: 0 DATE: 08-2022 TECH: KS	JH	KS	SB	STD. DWG. NO. M.1.0.0.0.0.T-007
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THREE PHASE, 3 WIRE 208Y VOLT GUIDE  
3 PHASE, 208Y/120V VOLT SERVICES

TABLE 8

INDIVIDUAL SERVICE CAPACITY	PROVISION FOR UTILITY OWNED METERING METERING SOCKETS AND CABINETS ARE SUPPLIED BY CUSTOMER ON LOAD SIDE OF MAIN DISCONNECT.  MINIMUM 1370mm (4'6) CENTER OF METER. MAXIMUM 1830mm (6'0") TO CENTER OF METER.	PROVISION FOR UTILITY OWNED OVERHEAD SERVICE CONDUCTORS	PROVISION FOR UTILITY OWNED UNDERGROUND SERVICE CONDUCTORS
<b>0-200 AMP</b>	5 – JAW METER SOCKET (NETWORK), 5TH JAW IN 9 O'CLOCK POSITION (SEE ENWIN CONDITIONS OF SERVICE SECTION 2.3.7.1 – 208Y/120V, THREE PHASE, 3 WIRE (NETWORK))	SECONDARY CLEVIS OR RACK REQUIRED.  AERIAL SERVICES SUPPLIED BY ENWIN WILL HAVE MAXIMUM TENSIONS AS FOLLOWS:  TRIPLEX SERVICE – 400kg (900 LBS.)	CUSTOMER – OWNED UNDERGROUND SERVICES ARE NORMALLY TERMINATED ON POLES OWNED AND INSTALLED BY THE CUSTOMER. THE LOCATION OF THESE POLES MUST BE SATISFACTORY TO ENWIN.
<b>201-400 AMP<sup>3</sup></b>	SEE ENWIN METERING STANDARD M.1.0.0.0.0.T-006, WYE SERVICE SHALL BE INSTALLED IN ACCORDANCE WITH ENWIN CONDITIONS OF SERVICE SECTION 2.3.4.2	OPEN WIRE SECONDARY SERVICES UP TO 400 AMP – 272kg (600 LBS.)/COND.	WHERE THE CUSTOMER REQUESTS TO TERMINATE ON A UTILITY POLE PERMISSION MUST BE OBTAINED FROM ENWIN. (NOT EXCEEDING 200 AMPS). CORFLEX (OR SIMILAR) CABLE WILL NOT BE ACCEPTED.
<b>401-800 AMP</b>	SEE ENWIN METERING STANDARD M.1.0.0.0.0.T-006, WYE SERVICE SHALL BE INSTALLED IN ACCORDANCE WITH ENWIN CONDITIONS OF SERVICE SECTION 2.3.4.2	OPEN WIRE SECONDARY SERVICES OVER 400 AMP – 450kg (1000LBS.)/COND.	IN AREAS OF UNDERGROUND DISTRIBUTION, ENWIN WILL INSTALL, OWN AND MAINTAIN UNDERGROUND SECONDARY CABLES UP TO THE DEMARCACTION POINT.
<b>OVER 800 AMP</b>	SEE ENWIN METERING STANDARD M.1.0.0.0.0.T-006, WYE SERVICE SHALL BE INSTALLED IN ACCORDANCE WITH ENWIN CONDITIONS OF SERVICE SECTION 2.3.4.2		

SWITCHGEAR: METERING WITH SWITCHGEAR – REFER TO CONTRACTOR INFORMATION FOR THE INSTALLATION OF PADMOUNT TRANSFORMERS (METERING). 5 JAW SOCKET REQUIRED WHEN USING ONLY 2 LINE (HOT) CONDUCTORS AND 1 NEUTRAL CONDUCTOR FOR SERVICE FROM A 3 PHASE, 4 WIRE SYSTEM. (IE. MULTI-METERED APARTMENT BUILDING).

- 1: FOR ACCEPTABLE LINE/LOAD CABINET CONNECTIONS REFER TO ENWIN METERING STANDARD M.0.0.0.0.0.A – "ACCEPTABLE LINE/LOAD LOCATIONS ON METERING CABINETS". METERING CABINET MUST HAVE MANUFACTURED FIXED BACK PLATE MOUNTING STUDS. CABINET HEIGHT 1980mm ± 150mm (78" ± 6") FROM THE FINISHED FLOOR TO THE TOP OF THE METER CABINET.
- 2: A NEUTRAL CONDUCTOR MUST BE INSTALLED IN THE STACK FOR FUTURE 4 WIRE CONVERSIONS.
- 3: THE NUMBER OF CONDUCTORS PER PHASE, CONDUCTOR TYPE/SIZE, AND METER CABINET CONFIGURATION CAN IMPACT WHICH TYPE OF CURRENT TRANSFORMERS WILL BE USED (BAR, DONUT, WINDOW, ETC.). CONSULT ENWIN METERING DEPARTMENT BEFORE PROCEEDING WITH INSTALLATION OF EQUIPMENT.

ISSUED	REVISION HISTORY	PRP:	CHK:	APP:	TITLE
PRP: –	REV: DATE: TECH: **INSERT NOTES HERE**				THREE PHASE, 3 WIRE 208Y VOLT GUIDE
CHK: –					3 PHASE, 208Y/120V VOLT SERVICES
APP: SB P.Eng					
DATE: 01-APR-2024	REV: 1 DATE: 01-APR-2024 TECH: KSL REVISED NOTES	JH	KSL	SB	
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	REV: 0 DATE: 08-2022 TECH: KS NEW STANDARD	JH	KS	SB	STD. DWG. NO. 1 REV: M.1.0.0.0.0.T-008 1 OF 1

**THREE PHASE, 3 WIRE 600 VOLT GUIDE  
3 PHASE, 600Y/347V VOLT SERVICES**

**TABLE 9**

INDIVIDUAL SERVICE CAPACITY	PROVISION FOR UTILITY OWNED METERING METERING SOCKETS AND CABINETS ARE SUPPLIED BY CUSTOMER ON LOAD SIDE OF MAIN DISCONNECT.  MINIMUM 1370mm (4'6) CENTER OF METER. MAXIMUM 1830mm (6'0") TO CENTER OF METER.	PROVISION FOR UTILITY OWNED OVERHEAD SERVICE CONDUCTORS	PROVISION FOR UTILITY OWNED UNDERGROUND SERVICE CONDUCTORS
<b>0-200 AMP</b>	5 – JAW METER SOCKET (NETWORK). 5TH JAW IN 9 O'CLOCK POSITION (SEE ENWIN CONDITIONS OF SERVICE SECTION 2.3.7.1 – 600Y/347V, THREE PHASE, 3 WIRE (NETWORK))	SECONDARY CLEVIS OR RACK REQUIRED.  AERIAL SERVICES SUPPLIED BY ENWIN WILL HAVE MAXIMUM TENSIONS AS FOLLOWS:  TRIPLEX SERVICE – 400kg (900 LBS.)	CUSTOMER – OWNED UNDERGROUND SERVICES ARE NORMALLY TERMINATED ON POLES OWNED AND INSTALLED BY THE CUSTOMER. THE LOCATION OF THESE POLES MUST BE SATISFACTORY TO ENWIN.
<b>201-400 AMP<sup>3</sup></b>	SEE ENWIN METERING STANDARD M.1.0.0.0.0.T-007, WYE SERVICE SHALL BE INSTALLED IN ACCORDANCE WITH ENWIN CONDITIONS OF SERVICE SECTION 2.3.4.2	OPEN WIRE SECONDARY SERVICES UP TO 400 AMP – 272kg (600 LBS.)/COND.	WHERE THE CUSTOMER REQUESTS TO TERMINATE ON A UTILITY POLE PERMISSION MUST BE OBTAINED FROM ENWIN. (NOT EXCEEDING 200 AMPS). CORFLEX (OR SIMILAR) CABLE WILL NOT BE ACCEPTED.
<b>401-800 AMP</b>	SEE ENWIN METERING STANDARD M.1.0.0.0.0.T-007, WYE SERVICE SHALL BE INSTALLED IN ACCORDANCE WITH ENWIN CONDITIONS OF SERVICE SECTION 2.3.4.2	OPEN WIRE SECONDARY SERVICES OVER 400 AMP – 450kg (1000LBS.)/COND.	IN AREAS OF UNDERGROUND DISTRIBUTION, ENWIN WILL INSTALL, OWN AND MAINTAIN UNDERGROUND SECONDARY CABLES UP TO THE DEMARCTION POINT.
<b>OVER 800 AMP</b>	SEE ENWIN METERING STANDARD M.1.0.0.0.0.T-007, WYE SERVICE SHALL BE INSTALLED IN ACCORDANCE WITH ENWIN CONDITIONS OF SERVICE SECTION 2.3.4.2		

SWITCHGEAR: METERING WITH SWITCHGEAR – REFER TO CONTRACTOR INFORMATION FOR THE INSTALLATION OF PADMOUNT TRANSFORMERS (METERING). 5 JAW SOCKET REQUIRED WHEN USING ONLY 2 LINE (HOT) CONDUCTORS AND 1 NEUTRAL CONDUCTOR FOR SERVICE FROM A 3 PHASE, 4 WIRE SYSTEM. (IE. MULTI-METERED APARTMENT BUILDING).

- 1: FOR ACCEPTABLE LINE/LOAD CABINET CONNECTIONS REFER TO ENWIN METERING STANDARD M.0.0.0.0.A – "ACCEPTABLE LINE/LOAD LOCATIONS ON METERING CABINETS". METERING CABINET MUST HAVE MANUFACTURED FIXED BACK PLATE MOUNTING STUDS. CABINET HEIGHT 1980mm ± 150mm (78" ± 6") FROM THE FINISHED FLOOR TO THE TOP OF THE METER CABINET.
- 2: A NEUTRAL CONDUCTOR MUST BE INSTALLED IN THE STACK FOR FUTURE 4 WIRE CONVERSIONS.
- 3: THE NUMBER OF CONDUCTORS PER PHASE, CONDUCTOR TYPE/SIZE, AND METER CABINET CONFIGURATION CAN IMPACT WHICH TYPE OF CURRENT TRANSFORMERS WILL BE USED (BAR, DONUT, WINDOW, ETC.). CONSULT ENWIN METERING DEPARTMENT BEFORE PROCEEDING WITH INSTALLATION OF EQUIPMENT.

ISSUED		REVISION HISTORY		PRP:	CHK:	APP:	TITLE	
PRP:	–	REV: DATE: ***INSERT NOTES HERE**	TECH:				THREE PHASE, 3 WIRE 600 VOLT GUIDE	
CHK:	–						3 PHASE, 600Y/347V VOLT SERVICES	
APP:	SB P.Eng	REV: 1 DATE: 01-APR-2024	TECH: KSL	JH	KSL	SB		
DATE:	01-APR-2024	REVISED NOTES						
SCALE:	NTS	REV: 0 DATE: 08-2022	TECH: KS	JH	KS	SB	STD. DWG. NO. M.1.0.0.0.0.T-009	1 REV: 1 OF 1
		NEW STANDARD						

**THREE PHASE, 27.6 KV GUIDE  
3 PHASE, 4-WIRE, 27.6/16kV SERVICES**

**TABLE 10**

PROVISION FOR UTILITY OWNED AERIAL SERVICE CONDUCTORS	PROVISION FOR CUSTOMER OWNED UNDERGROUND SERVICE CONDUCTORS	PROVISION FOR METERING		MAXIMUM AVAILABLE FAULT LEVELS
<p>TERMINATION HARDWARE AS PROVIDED BY UTILITY, INSTALLED TO WITHSTAND A TENSION OF 900 KG (2000 LBS) PER CONDUCTOR.</p> <p>UTILITY OWNED OVERHEAD SERVICES ORIGINATE FROM A UTILITY POLE AND NORMALLY EXTEND NO MORE THAN 30 METERS (100 FEET) OVER PRIVATE PROPERTY TO THE CUSTOMER'S STRUCTURE.</p>	<p>MINIMUM CONDUCTOR SIZE AS PER ONTARIO ELECTRICAL SAFETY CODE.</p> <p>CUSTOMER OWNED UNDERGROUND SERVICES ARE NORMALLY TERMINATED ON POLES OWNED AND INSTALLED BY THE CUSTOMER. THE LOCATION OF THESE POLES MUST BE SATISFACTORY TO THE UTILITY.</p>	<p><b>PRIMARY</b> <b>SWITCHGEAR:</b> PROVISIONS FOR INSTALLATION OF INSTRUMENT TRANSFORMERS IN CUSTOMER OWNED HIGH VOLTAGE SWITCH GEAR ON LOAD SIDE OF MAIN DISCONNECT.</p> <p><b>PRIMARY METERING UNIT:</b> ENWIN PROVIDED PRIMARY METERING EQUIPMENT INSTALLED AHEAD OF CUSTOMER SUBSTATION. TYPICALLY ON ENWIN-OWNED UTILITY POLE LOCATED WITHIN PUBLIC RIGHT-OF-WAY.</p> <p><b>REMOTE METER CABINET:</b> REFER TO ENWIN CONDITIONS OF SERVICE.</p>	<p><b>SECONDARY</b> REFER TO ENWIN CONDITIONS OF SERVICE SECTION— 2.3.4.2—SUPPLY VOLTAGE</p>	<p>835,000 KVA SYMMETRICAL (17,000 A) ACTUAL AVAILABLE FAULT CURRENT VARIES WITH RESPECT TO LOCATION AND TIME.</p> <p>ALL CUSTOMER SWITCH GEAR MUST BE RATED FOR THE 835 MVA MAXIMUM IN ANY CASE.</p>

1: THIS SECTION REFERS TO ELECTRICAL SUPPLY TO CUSTOMER OWNED SUBSTATIONS AT DISTRIBUTION VOLTAGE OF 27.6/16kV, 3-PHASE, 4-WIRE.

2: DELTA-DELTA AND DELTA-WYE TRANSFORMER CONFIGURATIONS ARE NOT PERMITTED FOR NEW INSTALLATIONS.

ISSUED		REVISION HISTORY			PRP:	CHK:	APP:	TITLE					
PRP:	—	REV: DATE: ***INSERT NOTES HERE**	TECH:					THREE PHASE, 27.6kV GUIDE 3 PHASE, 4-WIRE, 27.6/16kV SERVICES					
CHK:	—												
APP:	SB P.Eng												
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SCALE:	NTS	REVISED NOTES											
		REV: 0 DATE: 08-2022	TECH: KS	JH	KS	SB	STD. DWG. NO.	1	REV: OF	1			
		NEW STANDARD					M.1.0.0.0.0.T-010						

## **Appendix 3 – Metering Standards - General Information and Requirements**

### **3. General Service – Overhead and Underground Services**

#### **3.1. Overhead Secondary Services**

Refer to ENWIN Conditions of Service section 3.1.1.1 “Overhead Secondary Service”.

#### **3.2. Underground Secondary Services**

Refer to ENWIN Conditions of Service section 3.1.1.2 “Underground Secondary Service”.

#### **3.3. All Services**

Disconnect switches must have provisions for sealing line side doors and covers closed and padlocking the disconnect handle in the open position.

Meters shall not be installed in areas where there will be no radio RF (Radio Frequency) or cellular communication possible with ENWIN's meter reading network.

No unmetered loads, including transformers or receptacles, may be installed ahead of any metering equipment.

Customers are responsible for the supply, installation, and maintenance of all meter sockets, meter cabinets, panels, switches, conduits, service conductors, etc. All permanent services for dwellings must be a minimum 100A service.

If at any time the elevation of the work area surrounding the metering installation is altered, the service installation must be changed, at the Customer's expense, to bring the elevation of the metering equipment back to ENWIN Utilities Ltd. approved heights.

#### **3.4. Self-Contained Meters**

The meter location for residential customers shall be outdoors; any services upgraded with an existing meter that is located indoors must be relocated outdoors, at the Customer's expense.

The midpoint of the meter shall be 1.73m (5'-8")  $\pm$ 100mm (4") in height from finished grade, unless otherwise discussed with and pre-authorized by ENWIN. No part of meter base is permitted to be above or nearby gas discharge openings. Refer to ESA Bulletin 2-10-15.

Indoor meters shall not be installed in a bathroom, stairway, behind an oil tank, under a water/steam pipe, or within 460mm (18") of any water, gas, or steam pipes.

Outdoor meters shall be installed in an area that is not subject to dripping, splashing, or spraying water.

#### **4. Contractor Information – ENWIN Metering Requirements for Single and Multi-Unit Commercial Services**

##### **4.1. Floor Plans**

For multi-unit commercial services, a floor plan depicting the location of the units in relation to the electrical room shall be posted in the electrical room and a copy submitted to ENWIN. The drawing shall be revised within three months of any change to the floor plan.

##### **4.2. Meter Cabinets**

All meters must be located indoors or within a lockable weatherproof cabinet. Meter cabinets, switchgears, meter centres, etc. shall not be installed in bathrooms, stairways, behind oil tanks, or under a water/steam pipe or within 460mm (18") of any water, gas, or steam pipes. Meters must be installed in an area with a minimum ceiling height of 2140mm (84") with 460mm (18") clearance on either side and 914mm (36") in front of the meter or cabinet. Outer hinged meter cabinet doors must open at least 135°, inner hinged doors must open at least 90°.

Metering cabinets must have manufactured fixed backplate mounting studs. Self-tapping screws are not permitted. Cabinet height must allow for 1m (3 feet) between the finished floor and bottom of the cabinet. The location allocated for the metering equipment shall be directly accessible to ENWIN. It shall have not less than 914mm (36") of unobstructed space in front of the cabinet.

Where required, based on account classification, ENWIN will provide and install a fused 120V duplex receptacle inside the meter cabinet to provide power to a cellular modem. This is for remote interrogation of the interval metering system. The meter cabinet must be installed within an area where there is adequate cellular signal strength. Alternatively, the Customer may provide provisions to install an external antenna to meet this requirement, where possible.

All meter cabinets should be bonded according to the Ontario Electrical Safety Code.

The Customer shall install nylon or polyrope pull line with an excess of 1500mm (60") at each end in any conduit for remote metering.

##### **4.3. Single-Phase, Self-Contained Meters**

Customer to supply and install 4-jaw meter socket, indoors1, on the line-side of the service disconnect switch.

#### **4.4. Poly-Phase, Self-Contained Meters**

Customer to supply and install an approved meter socket per ENWIN requirements (See Section 5 of this document – ENWIN Meter Socket Requirements). Meter shall be installed indoors<sup>1,2</sup>, on load-side of service disconnect switch.

For multi-metered installations, a disconnect switch is required ahead of each individually metered sub-service.

If required, according to account classification, a 120-volt duplex receptacle shall be installed and located within 2m (6 feet) of the meter socket to provide power to a cellular modem.

<sup>1</sup> Permission for outdoor meter installations may be granted by ENWIN, on a case-by-case basis.

<sup>2</sup> Poly-phase outdoor meter installations required to be within a lockable, weather-tight enclosure.

#### **4.5. Cable Requirements**

The size/gauge and number of conductors per phase is limited according to the type and rating of the current transformers chosen for the specific metering installation.

Always consult with ENWIN before proceeding with the installation of electrical equipment. Mineral insulated, solid, or hard drawn wire conductors are not acceptable.

The minimum length of cable looped inside the meter cabinet for bar-type current transformers shall be 1m (39"). This cable must be continuous i.e. it must not be cut. Neutral conductors shall run straight through the cabinet, tight to one side, without a loop or slack.

For all bar-type CT connections with load estimates of 400A or less, conductors no larger than 300 KCMIL shall be used, with a maximum of two conductors per phase.

For all bar-type CT connections with load estimates greater than 400A, wires up to and including 500 KCMIL may be used, with a maximum of two conductors per phase.

If more than two conductors per phase, or conductors larger than otherwise permitted, are required, contact ENWIN before proceeding to discuss possible alternative solutions. This will be considered a deviation from our Standards which will require approval before permission is granted. Each situation will be reviewed on a case-by-case basis. Solutions may include the use of window-type CTs. If window-type CTs must be used, they shall be mounted on the backplate and installed in the cabinet by ENWIN before Customer's conductors are run.

#### **4.6. Conductor and Equipment Identification**

Each of the service conductors must be marked to identify the individual phases and neutral, both at the main switch and at the service entrance.

For multiple metering installations (both residential and commercial), each unit must be clearly and permanently identified along with their corresponding meter socket, disconnect switch, and panel.

In the case of remote disconnects in a meter centre or similar enclosure, the main disconnect switch handle and compartment must be identified.

The identification may be painted (oil based), engraved directly into the equipment, or consist of a permanently attached nameplate. Only the unit number or assigned municipal address may be shown on the equipment.

#### **4.7. Customer Switchgear**

Where space is provided in a Customer's switchgear for ENWIN provided CTs and PTs, a suitable meter compartment or minimum 508mm x 762mm x 254mm (20" x 30" x 10") remote meter cabinet must be provided. Remote cabinets must be located as close as possible to the instrument transformer compartment connected by 32mm (1- 1/4") rigid steel or EMT conduit, not exceeding 30m (100 ft).

In cases where switchgear will be installed, it will be the contractor's responsibility to install the CT's and PT's. These instrument transformers will be provided by ENWIN and can be picked up at the ENWIN Meter Shop.

#### **4.8. Outdoor Meter Cabinets**

Outdoor meter cabinets must be weather tight and have locking provision for ENWIN's padlock. It is the Customer and/or their contractor's responsibility to ensure that the cabinet selected will be deep enough to contain all the equipment to be installed within, including but not limited to: the meter socket, hydro meter, backplate, meter socket adapter (required for cellular communication), etc.

Three-phase, socket type meters shall be installed indoors, unless otherwise approved by ENWIN. If outdoor installation is permitted by ENWIN, a suitably enclosed, weather-rated cabinet, approved by ENWIN, must be installed.

#### **4.9. Meter Equipment Pick up and Delivery**

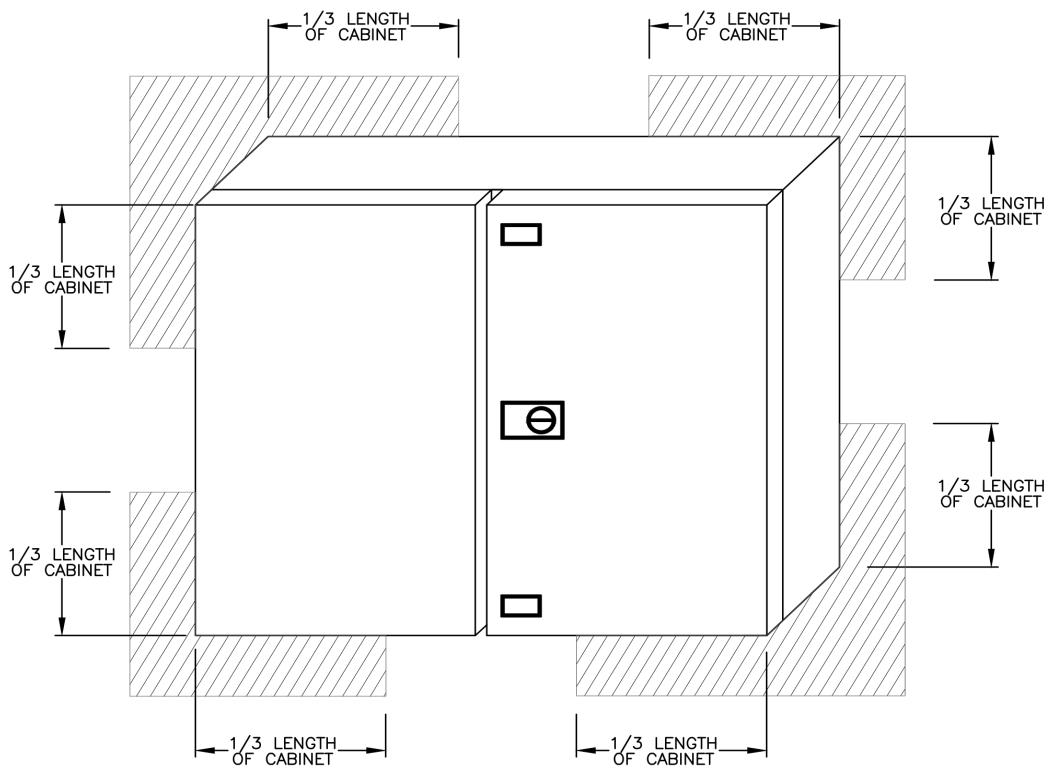
Ensure the meter cabinet backplate is delivered to the ENWIN Meter Shop, located at 4545 Rhodes Drive (251-7300 ext. 224), two weeks before the scheduled inspection. In

all instances, ENWIN will be responsible for wiring the meter cabinet backplate, including the installation of CTs and PTs if required.

Please label the backplate with the following information prior to delivery:

- Address (must be written directly on the back plate in black marker)
- Top/Bottom
- Line and Load Entry and Exit points (see ENWIN Metering Standards Drawing M.0.0.0.0.0.A - ACCEPTABLE LINE/LOAD LOCATIONS ON METERING CABINETS)
- Size of main
- Conductor size and type (i.e. copper or aluminum)
- Voltage

## Appendix 4 – Acceptable Line/Load Locations on Metering Cabinets



 = AREA OF ACCEPTABLE LINE/LOAD LOCATIONS

\* LINE/LOAD CONDUCTORS SHALL BE INSTALLED ADJACENT TO ONE SIDE,  
ALIGNED EITHER HORIZONTALLY OR VERTICALLY, AVOIDING ANY DIAGONAL  
ROUTING THROUGH THE CABINET.

ISSUED		REVISION HISTORY			PRP:	CHK:	APP:	TITLE	
PRP:	—	REV:	DATE:	TECH:				ACCEPTABLE LINE/LOAD LOCATIONS ON METERING CABINETS	
CHK:	—	**INSERT NOTES HERE**							
APP:	SB P.Eng	REV:	DATE:	TECH:					
DATE:	01-APR-2024	**INSERT NOTES HERE**							
SCALE:	NTS	REV: 0	DATE: 01-APR-2024	TECH: KSL	JH	KSL	SB	STD. DWG. NO.	1 REV: 0
		NEW STANDARD						M.0.0.0.0.0.A	1 OF 1

## Appendix 5 – Unmetered Scattered Load Process Map

TABLE 9.1 - UNMETERED SCATTERED LOAD – PROCESS MAP

Customer Connection / Transfer / Disconnection / Removal Services

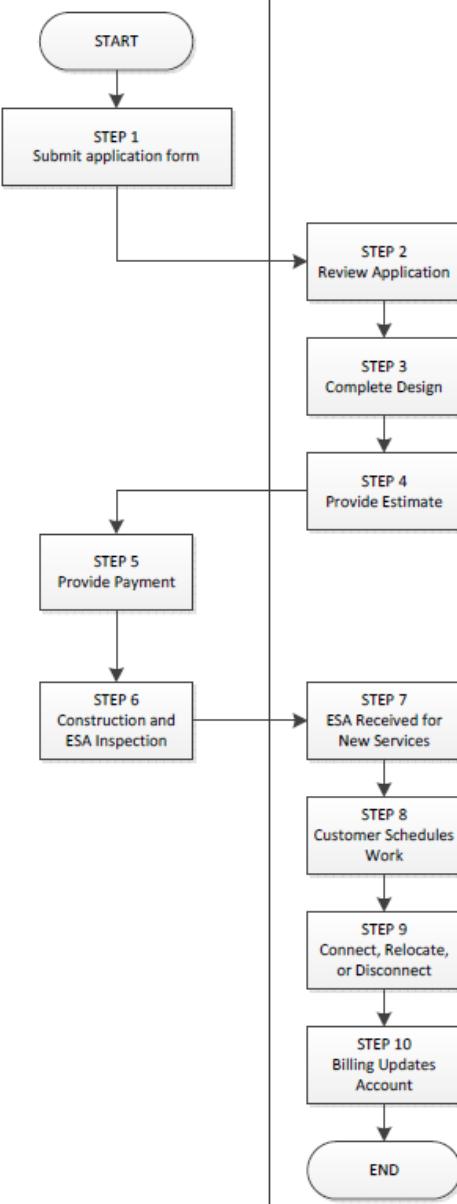
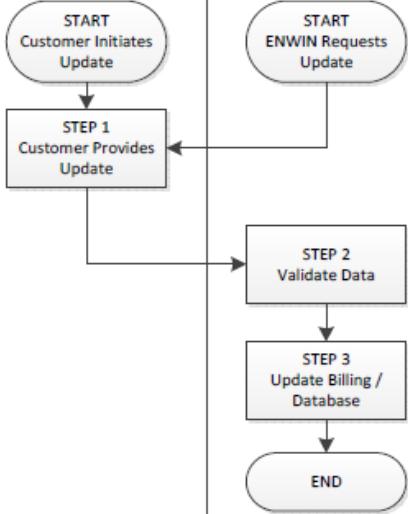
Customer	ENWIN	Function
 <pre> graph TD     START([START]) --&gt; STEP1[STEP 1 Submit application form]     STEP1 --&gt; STEP2[STEP 2 Review Application]     STEP2 --&gt; STEP3[STEP 3 Complete Design]     STEP3 --&gt; STEP4[STEP 4 Provide Estimate]     STEP4 --&gt; STEP5[STEP 5 Provide Payment]     STEP5 --&gt; STEP6[STEP 6 Construction and ESA Inspection]     STEP6 --&gt; STEP7[STEP 7 ESA Received for New Services]     STEP7 --&gt; STEP8[STEP 8 Customer Schedules Work]     STEP8 --&gt; STEP9[STEP 9 Connect, Relocate, or Disconnect]     STEP9 --&gt; STEP10[STEP 10 Billing Updates Account]     STEP10 --&gt; END([END])   </pre>	<p>This flowchart pertains to the supply of electrical energy for telephone booths, cable T.V. amplifiers, and similar small unmetered loads.</p> <p><b>STEP 1 – SUBMIT APPLICATION FORM</b> Customer shall contact ENWIN for supply requirements and provide manufacturer information and documentation with regard to the electrical demand and expected hours of operation of the proposed unmetered load. Application can be e-mailed to Technical Services at TSD@enwin.com or brought to the Rhodes Drive facility.</p> <p><b>STEP 2 – REVIEW APPLICATION</b> ENWIN will review the application to determine if any information is missing or if additional information is required.</p> <p><b>STEP 3 – COMPLETE DESIGN</b> ENWIN will design a service to feed the customer load which may include equipment such as conductors or transformers.</p> <p><b>STEP 4 – PROVIDE ESTIMATE</b> ENWIN will prepare an estimate of any connection fees to be paid by the Customer. Customer also chooses to pay the estimate or actual cost.</p> <p><b>STEP 5 – PROVIDE PAYMENT</b> Customer submits payment (if required)</p> <p><b>STEP 6 – CONSTRUCTION AND ESA INSPECTION</b> Complete construction of customer owned plant and arrange for Electrical Safety Authority (ESA) Inspection</p> <p><b>STEP 7 – ESA RECEIVED FOR NEW SERVICES</b> The Customer shall get their installation approved by the ESA. ESA will notify ENWIN directly when ESA Inspection has passed.</p> <p><b>STEP 8 – CUSTOMER SCHEDULES WORK</b> Once ESA has passed, the Customer must contact ENWIN Technical Services Department at 519-251-7303 to schedule a connection/relocation/disconnect date and time.</p> <p><b>STEP 9 – CONNECT/RELOCATE/DISCONNECT</b> ENWIN crews perform the work</p> <p><b>STEP 10 – BILLING UPDATES ACCOUNT</b> Once the work is complete, billing is notified of the changes and the Customer's account is updated accordingly.</p> <p>NOTE: Periodic audits which may include field audits and/or on-site measurements of unmetered accounts to validate the data provided by the Customer.</p>	

TABLE 9.2 - UNMETERED SCATTERED LOAD – PROCESS MAP

Existing Customer Service Updates and Validation

Customer	ENWIN	Function
 <pre> graph TD     subgraph Customer         START1((START Customer Initiates Update)) --&gt; STEP1[STEP 1 Customer Provides Update]         STEP1 --&gt; STEP2[STEP 2 Validate Data]         STEP2 --&gt; STEP3[STEP 3 Update Billing / Database]         STEP3 --&gt; END1(END)     end     subgraph ENWIN         START2((START ENWIN Requests Update)) --&gt; STEP1         STEP1         STEP2         STEP3     end     </pre>		<p>This flowchart pertains to the supply of electrical energy for telephone booths, cable T.V. amplifiers, and similar small unmetered loads.</p> <p>Existing Customer updates shall be provided on a regular interval and on request by ENWIN. The Customer shall provide immediate updates on any Customer changes.</p> <p><b>STEP 1 – CUSTOMER PROVIDES DATA UPDATE</b> Customer shall contact ENWIN on a regular basis to provide updates on any changes to the connected unmetered load. Updates can be e-mailed to Technical Services at <a href="mailto:TSD@enwin.com">TSD@enwin.com</a> or brought to the Rhodes Drive facility. ENWIN requested data updates may include details such as the precise location, service size, load profiles, and account information.</p> <p><b>STEP 2 – VALIDATE DATA</b> Data updates shall be provided in a format acceptable to ENWIN. ENWIN may request field audits and Customer's work documentation to support changes and validation. Any updated data will be reviewed for accuracy and completeness. ENWIN will notify the Customer of any additional information required or audit requirements in order to complete the updated data review. Periodical audits of existing Customer accounts may be required to validate the data accuracy. ENWIN may perform audits which include field audits and/or on-site measurements of unmetered accounts to validate the data provided by the Customer.</p> <p><b>STEP 3 – UPDATE BILLING / DATABASE</b> ENWIN will update records based on the information provided by the Customer subject to verification through the validation process. ENWIN will inform the Customer of any changes to their account in writing.</p>

## Appendix 6 – Requirements for EVSE Connections

This appendix applies to customers seeking to **connect non-residential electric vehicle supply equipment (EVSE)**<sup>1</sup> to ENWIN Utilities Ltd.'s ("ENWIN") distribution system. It does not apply to residential customers seeking to install electric vehicle (EV) chargers. If you are a residential customer, please contact ENWIN's Technical Services department at [tsd@enwin.com](mailto:tsd@enwin.com) or 519-251-7303 for more information.

### 1. Connection Request

Customers considering connecting EVSE to ENWIN's distribution system must:

1. Submit an [EV Preliminary Consultation Information Request \(EV-PCIR\) form](#), OR
2. Submit an [Application Form for Electrical Service](#).

When customers submit EV-PCIR forms, ENWIN will provide an EV Preliminary Consultation Report (EVPCR) at no cost within 15 days of receiving a complete EV-PCIR<sup>2</sup>. However, **it does not consider the full range of technical evaluations performed under an application for electrical service, and capacity is not reserved upon completion of an EVPCR**. Upon request, ENWIN will meet with customers at the time it provides the EVPCR to discuss its contents.

When customers want to connect EVSE to ENWIN's distribution system, they must submit an Application Form for Electrical Service. ENWIN will contact customers within 15 days to confirm receipt and completeness of the Application Form for Electrical Service, or request further information. Within 60 days of receiving a complete Application Form for Electrical Service, ENWIN will review same and provide customers with an Offer to Connect.

### 3. Basic Connection

The Basic Connection is the Residential Basic Connection or equivalent credit. Where customers' connection requirements exceed the Basic Connection, there may be additional Variable Connection charges associated with the installation of assets and/or any expansion of the distribution system, set out in more detail in the Offer to Connect.

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<sup>1</sup> E.g. Level 2 and Level 3 charging stations, such as publicly accessible direct current fast charging stations, workplace charging, charging stations used for commercial EV fleets and charging installations for multi-unit residential or commercial buildings, where the EV chargers are owned or operated by the building owner or a third-party charging provider.

<sup>2</sup> The EVPCIR will indicate whether an expansion is expected to be required, the estimated capacity at the connection point, an assessment of the expected complexity of the connection, and any additional information that may benefit customers.

#### **4. Offer to Connect**

ENWIN's Offer to Connect will indicate whether, in addition to the Basic Connection, the EVSE connection requires new or modified connection assets or whether an expansion of its distribution system (with or without capital contribution) is required. ENWIN's Offer to Connect will be in accordance with section 2.1.2 of its Conditions of Service.

#### **5. Capital Contribution**

If an EVSE connection requires an expansion of ENWIN's distribution system and a capital contribution from customers, ENWIN will conduct any capital contribution settlement in accordance with section 2.1.2.2 of its Conditions of Service.

#### **6. Alternative Bid Option**

If a capital contribution is required for an expansion of ENWIN's distribution system to accommodate an EVSE connection, ENWIN will permit customers to pursue alternative bid options for any eligible work as set out in section 2.1.2.1 of its Conditions of Service.

#### **7. Expansion Deposit**

If an EVSE connection requires an expansion of ENWIN's distribution system and a capital contribution from customers, ENWIN will require an expansion deposit and it will determine the value of same in accordance with section 2.1.2.3 of its Conditions of Service. ENWIN will provide any applicable rebates in accordance with section 2.1.2.4 of its Conditions of Service.

#### **8. Connection Agreement**

Prior to connection of the service, customers must meet the conditions set out in section 3.2.2 of the Conditions of Service.

Customers are responsible for obtaining all necessary permits and approvals (e.g. Electrical Safety Authority permits and approvals) prior to the commencement of any electrical work under their scope.

Once all service conditions are satisfied, ENWIN will complete the connection and conduct the final economic evaluation in accordance with the Distribution System Code.