HydroOttawa		TITLE: **Electrical Customer Specification**	
RECOMMENDED:	**R. Abdullah**	NO: **ECS0023**	REV: **4**
APPROVED:	**C. Malone, P.Eng.**		
REV. DATE:	**2012-03-02**		

UN-METERED SERVICE CONDITIONS, CONNECTIONS & UPGRADES

See Hydro Ottawa's Internet site for the latest revision www.hydroottawa.com

REVISION SHEET

Revision	Description	Date	Initial
0	Original document	2009-09-08	ra/csm
1	Section 4.1.1, 6.2 and Schedule A updated	2010-01-13	ra/lv/csm
2	Section 4.3.1 – random sampling rate Section 6.3 – extra work	2010-03-26	ra/csm
3	Section 4.3.1 – required data	2011-09-28	ra/csm
4	Section 3 – MCCL power factor adjusted Section 4.3.1 – added ANSI cert lab Section 4.3.1 – demand over the service life Schedule C - added	2012-03-02	ra/csm

TABLE OF CONTENTS **PAGE**

1.0 Introduction

Un-metered customer loads are intended for use within the road right-of-way and are permitted at the discretion of Hydro Ottawa Limited (HOL). This type of service offering is specifically made available to companies that are in good standing with Hydro Ottawa and licensed for equipment access with the road authority, such as government agencies, community associations, and temporary event organizations.

HOL has the fiduciary responsibility to all customers to ensure that good processes are established and followed. Subsequently, for a customer to take advantage of the lower tariffs, consolidated billing, and less complex supply point equipment associated with an un-metered service, there are reciprocal obligations and responsibilities that must be met by both HOL and the un-metered service customer.

This document supports HOL's Conditions of Service (ESC0012) by describing the practices to be followed by HOL staff and all un-metered single phase secondary service customers within HOL's service territory.

2.0 References

Hydro Ottawa – ECG0002 - Technical Guideline for Customer Owned Standby Generation
Hydro Ottawa - ECG0004 - Un-metered Secondary Ownership Demarcation
Hydro Ottawa - ECG0008 - Distribution System Voltage and Power Quality
Hydro Ottawa - ECS0012 - Conditions of Service
Hydro Ottawa - ECS0025 - Un-metered Outage Protocol
Military Standard - 105E - ANSI/ASQC Z1.4, ISO 2859 Sampling Tables
Ontario Energy Board - Distribution Rate Handbook
Ontario Energy Board - Distribution System Code

3.0 Definitions & Abbreviations

Demarcation Point see ECS0012, Section 3.8 – Un-metered Services and ECG0004

Acceptable Variance refers to the tolerable difference between the billed USL unadjusted consumption to the actual unadjusted consumption. This is based on two references – the "Loss Factor," and Measurement Canada's permitted tolerance for electricity revenue meters (+/- 1%) - the acceptable variance for USL only shall be the higher of the two references, however, shall never be more than 3.44 times (the present System Loss Factor) the Measurement Canada limits. HOL calibrates its meters to 0.2% tolerance.

CIS is an abbreviation for HOL's Customer Information System used for billing energy accounts

Connection — see ECS0012, Section 4 - Glossary of Terms

Electrical Load Power Factor is the Weighted Average power factor of lab tested sampled device over the device expected operating life. The testing shall have considered average device loading (i.e., service factor or use) over the operating life of the device.

Enhancement — see ECS0012, Section 4 - Glossary of Terms

ESA — is an abbreviation for Electrical Safety Authority

Expansion — see ECS0012, Section 4 - Glossary of Terms

GPS — is an abbreviation for Global Positioning System

HOL — is an abbreviation for Hydro Ottawa Limited

Maximum Continuous Calculate Load refers to the calculated consumption of a device based on that device operating without interruption at any time. Thus, the calculation is based on the billable load multiplied by 24 hours-per-day multiplied by 365 days in a typical year. The device Electrical Load Power Factor and the service entrance disconnect switch rating are both considered in determining the billable load.

Determination of the billable load is based on the largest demand from the following three separate calculations:

(1) 100% of the device nameplate wattage (W),
(2) 90% of the device volt-ampere (VA) rating per the Electrical Load Power Factor (Note: this is not simply the multiplication of the nameplate voltage and ampere rating), OR
(3) 80% of the service entrance disconnect switch rating ampere (A) rating multiplied by the nominal supply point voltage (V). Use of a reduced rated fuse or breaker is not considered.

Load or consumption offset by generation is not considered.

Month — refers to the average 30.4 days per twelve even periods that would total to a calendar year.

OEB — is an abbreviation for Ontario Energy Board

Operating Life — is the expected device population average survival in-service period before end-of-life. The survival may be longer than the mean time before failure (MTBF), and it can be longer than the economic end-of-life or obsolescence date.

Supply Point — see ECS0012, Section 4 - Glossary of Terms

Un-metered Loads see ECS0012, Section 4 - Glossary of Terms

USL is an abbreviation for un-metered scattered loads

VAR An electrical measure meaning, Volt, Ampere, Reactance

Weighted Average refers to the mean of results from a sampling of items whereby extra consideration is given to one or more measured parameters of the sample results (as set out in section 4.3.1).

4.0 General Conditions for Un-metered Loads

Acceptance of an un-metered load by HOL, subjects HOL and the un-metered service customer to uphold the conditions and respective responsibilities contained within this document.

Where a customer is affixing its attachments to a HOL asset, an additional customer specific pole attachment agreement is necessary. This agreement may include requests for additional data and/or may be subject to specific conditions.

4.1 General Responsibilities

4.1.1 Un-metered Customer Responsibilities

- Comply with the requirements of HOL standards and the Ontario Electrical Safety Code to ensure public safety.
- Retain all information provided to and by HOL per the terms in Section 4.3 Data Quality & Auditing Requirements, and Records Retention, HOL may not retain record details with each un-metered service and thus will not be held responsible for any incomplete records.
- Install, operate, and maintain its secondary conductor from the HOL designated Supply Point to the intended load.
- Provide timely and accurate data (refer to Section 4.3 & Schedule A).
- Accept energy consumption based on either:
  - The maximum continuous calculated load, or
  - The results of a HOL accepted audit (refer to Section 4.3).
- Allow no external party to connect to its un-metered service and its un-metered secondary bus. For different internal corporate groups sharing the same un-metered bus, a tri-party agreement (see Schedule C) shall be executed with HOL to define operating, maintenance, and cost responsibilities with those groups.
- Relocate, at the customer's cost, the secondary conductors of an un-metered service to another designated Supply Point at HOL's request.
- Complete and sign the declaration in Schedule B and submit to HOL's USL representative in a timely manner by January 31 of each year
- Un-metered connection facility is not intended for customers to

generate back into Hydro Ottawa's distribution system. If an un-metered customer has generation facilities, the connection shall meet Hydro Ottawa's technical specification ECG0002 for standby generation.

4.1.2 HOL Responsibilities:

- Provide a service layout for each un-metered service location that identifies the Supply Point and prescribes any applicable HOL standards and conditions.
- Strive to make new un-metered service connections within ten working days of having all HOL connection conditions met. (Note: OEB Service Quality Indicators only apply to metered services but have been extended to un-metered services by HOL).
- Provide reasonable notice to the un-metered service customer should the Supply Point require relocation:
  - Planned Supply Point relocations - 90 day written notice.
  - Emergency Supply Point relocations – when possible.
- Assign the USL energy account for New Connection load. There should be only one USL energy account per energy jurisdiction.
- Ensure that un-metered service billing information accurately reflects calculated electrical consumption by unit, quantity, load profile and demand. Devices of the same class by type or load will be grouped together where possible and assigned the same billing determinants.

4.2 Data Requirements

4.2.1 New Un-metered Services

- New un-metered services shall meet with the data quality requirements described in Section 4.3.1 of this document.
- Un-metered service customers shall provide HOL with the necessary information to complete each un-metered service layout per Schedule A.

4.2.2 Existing Un-metered Services

- Throughout the lifecycle of the un-metered service, un-metered service customers are required to submit updated and accurate data to HOL when it becomes known by the customer or requested by HOL.
- The data, the timing, and method of submission are outlined in Schedule A. Also, an annual declaration by the customer as per Schedule B confirming data accuracy shall be made.

4.3 Data Quality & Auditing Requirements, and Records Retention

In the event that HOL or the un-metered customer identify or cause a billing error, HOL will rectify the matter consistent with this section and Section 6.6. The customer shall meet the following data requirements:

4.3.1 Data Quality Requirements

- GPS coordinates shall be provided in degrees:minutes:seconds (i.e., 45:26:45.25, -75:20:88.1) or decimal format (45.354153,-75.9845542). However, the measurement shall comply with NAD83, Modified Transverse Mercator, Zone 9, three-degrees and have an accuracy within +/- 2.0m radius of the actual un-metered device location.
- Electrical profile, power quality, and usage accuracy studies are required when new un-metered equipment is introduced or when requested by HOL. The un-metered customer, at its cost, has the following two options available to develop and prove this information to HOL:
  (1) An in-house test plan (covering: scope, applicability, conditions, quality control, measurement devices, timing, staff competencies, control documents, error resolution process, and external references) for HOL approval. Final results and report shall be signed and sealed by a Professional Engineer of Ontario; or
  (2) A signed and sealed certified test report from a Standards Council of Canada or ANSI compliant laboratory having competencies in electrical equipment testing.
  (3) In either case, the test plan and report shall outline how the probability sampling ensures a 3.4% confidence interval with a 95% confidence level for each load type by similar energy usage profile for the proposed installation. Generally, stratified sampling may be needed to ensure conformance. To ensure adequate sampling requirements are met, ANSI/ASQC Z1.4 sampling tables may be referenced.
- The un-metered electrical equipment shall meet or exceed HOL's Distribution System Voltage and Power Quality requirements (ECG0008); specifically the Weighted Averages for:
  - electrical harmonic generation; and
  - electrical load power factor.
- The un-metered electrical equipment energy usage shall be provided; specifically the Weighted Averages for:
  - electrical load demand over its expected Operating Life; and
  - control characteristics affecting electrical load demand (eg. photo-controller, thermostat, timers, …).
- Where data errors are identified, the applicable costs described in Section 6.6 shall apply.

4.3.2 Data Auditing Requirements

- The un-metered service customer or HOL may initiate an audit on regular intervals or on notice.

4.3.3 Records Retention

- The customer shall retain information provided to and by HOL for a minimum period of seven years while the service is in a state other than "permanently removed" (see 6.1.3). Once the service has been permanently removed, the retention period shall be a minimum of two years.
- The retained information shall include yet, not be limited to, the detail in Schedule A (column Information Source, Customer), Schedule B, and any other relevant correspondence or agreements regarding the un-metered account including the associated service connections and load.
- The customer not retaining such records would result in costs for HOL to research and reconstruct missing information plus the costs described in Section 6.5 Audit Costs, and 6.6 Error Costs.

5.0 Un-metered Load Types Defined

There are eight load types described below, of which, six may qualify for un-metered single phase secondary servicing. The method and location of Supply Point may vary for each application and shall be established through consultation with HOL.

5.1 Street Lighting

Street lighting on public roads may qualify for un-metered servicing.

5.1.1 Service Information

- Single-phase, three wire, 120/240 volts.
- Street lighting loads less than or equal to 100 Amps may be un-metered; loads greater than 100 Amps shall be metered.

5.2 Traffic Signals

Traffic lights and crosswalks on public roads may qualify for un-metered servicing.

5.2.1 Service Information

- Single-phase, three wire, 120/240 volts.
- Traffic lights and/or crosswalks loads less than or equal to 100 Amps may be un-metered; loads greater than 100 Amps shall be metered.

5.3 Bus Shelters

Bus shelters on public roads may qualify for un-metered servicing.

5.3.1 Service Information

- Single-phase, two wire, 120 volts.
- Bus shelter loads less than or equal to 15 Amps may be un-metered; loads greater than 15 Amps shall be metered.

5.4 Parks & Pathway Lighting

Publicly owned park and/or pathway lighting may qualify for un-metered servicing.

5.4.1 Service Information

- Single-phase, two wire, 120 volts.
- Publicly owned park and/or pathway lighting loads less than or equal to 15 Amps may be un-metered; loads greater than 15 Amps shall be metered.

5.5 Decorative Lighting

Privately owned occasional festive or decorative streetscape lighting on public roads may qualify for un-metered servicing.

5.5.1 Service Information

- Single-phase, two wire, 120 volts.
- Privately owned occasional festive or decorative streetscape lighting loads less than or equal to 15 Amps may be un-metered; loads greater than 15 Amps shall be metered.
- Pole attachment agreement if the decorative lighting is to be mounted on Hydro Ottawa owned poles.
- A temporary municipal encroachment permit for road access and assigned responsibilities.

5.6 Fire Pump Services

All new fire pump loads shall be located in front of the service entrance main breaker and shall be metered. Existing fire pump loads located after the service entrance main breaker shall be upgraded to a metered load with any major service entrance upgrade.

5.7 Billboards

All new billboard services shall be metered. Existing un-metered billboard loads shall be upgraded to a metered load with any changes that require ESA connection authorization. See Section 3.2 and 3.8 of ECS0012 (HOL - Conditions of Service).

5.8 Other Small Services

Telephone booths, small power supplies and communication amplifiers & antennas, road & utility cathodic protection, railway signals, flasher beacons, and similar small customer loads may within the public road right-of-way qualify for un-metered servicing.

5.8.1 Service Information

- Single-phase, two wire, 120 volts.
- Small service loads less than or equal to 15 Amps may be un-metered; loads greater than 15 Amps shall be metered.

6.0 Service Costs

6.1 General Billing Conditions

There are three life-cycle states of an un-metered service. They are: "proposed," "in-service," or "permanently removed." In each case, the minimum billing period remains one month regardless of when the un-metered service lifecycle state changes. Also, billing of the energy and fixed charges continues monthly in all states until the service has been permanently removed.

6.1.1 Proposed

On request of a new connection, the customer's proposal will initiate the service point as "Proposed" for a period of up to 90-days.

6.1.2 In-Service

An un-metered service is deemed to be "in-service" when it has been energized or it has been electrically isolated (removed from any electrical energy source) at any time between being energized or permanently removed. The two in-service states are described as follows:

a) Energized

An existing un-metered service that has been physically connected to the HOL distribution network is deemed to be "Energized".

b) Electrically Isolated

An existing un-metered service that has been physically detached from the HOL distribution network energy source is deemed to be "electrically isolated." Isolation of the un-metered service may be initiated by HOL for power quality, outage problems, or data issues (see Section 6.6), or by the customer through written request.

In this state, HOL continues to calculate the bill (energy and fixed charges) on a per month basis for not more than six consecutive months. Following the sixth month of being "electrically isolated," the un-metered service must either be put back "in-service" or be "permanently removed" from service. HOL retains the right to disconnect the service per terms defined in the HOL Conditions of Service ECS0012. Reference to that document may also be made for clarification on the difference between isolation and disconnection.

6.1.3 Permanently Removed

An un-metered service is deemed "permanently removed" following the sixth consecutive month in the "electrically isolated" state, or where the

customer requests that the un-metered service be permanently cancelled and physically detached from the HOL distribution network energy source.

Where an un-metered load has been deemed "permanently removed," billing charges (energy and fixed charges) cease to accrue in the following month to the consolidated un-metered service bill.

Re-energization of an un-metered service in this state shall be treated as a new un-metered service and be subject to the requirements contained within this document.

6.2 Ongoing Account Tariffs and Charges

The customer shall work with HOL to classify like energy devices such that similar devices can be consolidated to similar energy usage profiles for energy billing purposes. When requested by HOL, the customer shall consolidate their separate un-metered billing accounts down to at least the number of similar energy profile classifications or less.

Security deposits, billing and payment options are handled as specified in Section 2.4 of ECS0012 (HOL - Conditions of Service).

6.3 Work by HOL

HOL connection, isolation and re-energization fees are calculated based on the methodology in Appendix G of ECS0012 (HOL - Conditions of Service). Note that extra work by HOL beyond a simple connection onto the overhead or underground system is at the customer's expense.

For additional information or price quotations, contact the HOL Service Desk listed in Section 1.5 of ECS0012 (HOL - Conditions of Service).

6.4 Disruptive Loads

Disruptive loads are resolved as specified in Section 2.3 of ECS0012 (HOL - Conditions of Service) and ECG0008 (HOL – Distribution System Voltage and Power Quality). Where disruptive customer loads persist, the un-metered customer may be billed for subsequent HOL restoration costs, or may be "electrically isolated" or "permanently removed" from the HOL distribution network.

For planned and unplanned outages, see ECS0025 (HOL – Outage Protocol for Un-metered Services) for un-metered customer service reporting, investigation, and restoration process.

6.5 Audit Costs

Un-metered service customers are responsible for their costs associated with any audit.

6.6 Error Costs

HOL encourages voluntary data error disclosure and data quality improvement. Reoccurring data errors or data quality problems may result in an un-metered load

being “electrically isolated” or “permanently removed” from the HOL distribution network, with the option for the customer to upgrade to a metered service from a HOL designated Supply Point.

Where an un-metered service customer volunteers corrected or improved data before commencement of a joint audit, the customer will be responsible for their corrected consumption usage going forward.

To improve the quality of the un-metered data, HOL encourages the un-metered customer to cooperate in a joint audit as described in Section 4.3 of this document. In this case, the customer will be responsible for their associated audit costs and their corrected consumption usage going forward.

If the un-metered customer provides HOL poor un-metered data (i.e. not to audit standards), no data, or late data, the un-metered customer shall pay HOL’s field verification and data correction costs, as per ECS0012 - Conditions of Service – Appendix G – Isolation / Reconnection equivalent costs per each un-metered load, and the corrected consumption usage going forward.

Schedule A: Audit & Billing Data

Field	Information	Info used for Billing (B) or OMS (O)	Information Source*		Responsibility for On-going Information Accuracy	
			Hydro Ottawa (Service Layout) or Audit	Customer	Hydro Ottawa	Customer
System Voltage	Primary voltage	O	Y – SL	--	Y	--
Source Circuit ID 1	Primary circuit the un-metered service us connected to.	O	Y – SL	--	Y	--
Orientation	Overhead (OH) or Underground (UG) secondary feed	O	Y – SL – accept customer/ consumer preference if feasible	Y – SL -- indicate preference at time of service layout request	Y	--
Phase	Red, White or Blue primary phase the un-metered service us connected to.	O	Y -- SL	--	Y	--
Owner Name	Registered Owner of connected Asset. Owner of the secondary bus downstream of the Supply Point.	B, O	Y – iSL,Move In/Out	Y – iSL, Move In/Out	Y	--
Energy Jurisdiction	Who is responsible for paying energy bill	B	Y – iSL,Move In/Out	Y – iSL, Move In/Out	--	Y
CIS Account No	New or existing HOL CIS Account Number un-metered service is to be added to.	B	Y – based on **Energy Jurisdiction** information.	--	Y	--

Load Type	List per "Un-metered Services" on the Service Layout form: AMP/PSUPPLY BILLBOARD/SIGN BUILDING BUS SHELTER CABINET CATHODE DECORATIVE LIGHT FLASHING BEACON FLOW MONITOR GAS REC PARK PEDESTRIAN SIGNAL PHONE BOOTH RAIL STREETNAME TRAFFIC CAMERA TRAFFIC SIGNALS WIFI SUPPLY OTHER Included grandfathered fire pumps and billboards.	O	Y – iSL, A	Y – iSL	--	Y
Load Unique Identifier	Unique identifier the customer has for their device. Can relate to the equipment type, model number, and then load in the Audit repository.	O	Y – iSL, A	Y -- iSL	--	Y
Service Point Street Number **Service Point Street Name**	For small quantity of connections, Service Layouts gets the information, not customer provided. For large quantity of connections,	B, O	Y – SL	Y – SL	Y	--

	the customer shall provide addressing in the Hydro Ottawa format as defined in its civic addressing standard DFS0009. Auto list the permissible addresses per what's available for CIS / GIS lists This is the address for the device, not the Owner or Billing address, which will reside in CIS. The device address is tied to the GPS coordinate provided by Customer.					
Total Connected Load (W)	Total load for connected devices. Same as Billable Load for most Un-metered loads accept electronically controlled loads such as traffic signals	O	Y -SL	Y –SL		Y
Billable Connected Load (W)	Unit is Watt (W) based on 90% power factor. Load to be billed each month and predetermined by HOL and Customer.	B	Y – iSL, A	Y – iSL	--	Y
Hours On Per Day	Number of hours load will be on each day calculated as an average for the year. Predetermined by HOL and Customer.	B	Y – iSL, A	Y – iSL	--	Y
Connection Status	Used to temporarily isolate service for repairs. Fixed charges continue, kWh charges suspended. Isolation must be pre-approved and must be greater than 2 months (so energy charges don't apply) and less than 6 months. The states are "Energized" and "Isolated" (the State must be "In-Service")	B	Y	Y	Y	

Supply Point	Transformer ID, Bus Ownership (HOL, Street lighting, other)?	O	Y – SL	--	Y	--
Audit Meter Number	Populated where a check meter exists.	--	Y – A	--	Y	--
LDC Approval Connection Project Number	The service layout request number or the JDE project number.	B	Y	--	Y	--
Misc. Comments	Open free-form field.	--	Y	--	Y	--
LDC Connection Date	Month and year.	B	Y	--	Y	--
State	Electrical connection state is either Proposed, In-Service, or Removed. When Removed, the record is deleted from GIS.	O, B	Y	Y	Y	Y
GPS Location	Require Northing, Easting per NAD 83, three-degree. This information is needed for placing the device on GIS. When the device is selected on the map, the (X,Y) coordinate is provided.	O	Y – iSL, A	Y – SL	--	Y

Where it appears there are two sources of information, the Customer is to provide the information for HOL's records when requested by HOL. Information obtained by HOL will be used to populate the information database.

Where it appears there is responsibility for joint information accuracy, refer to ECS0023 for more detail.

* Legend:
  - iSL – initially through Service Layout
  - SL -- from Service Layout

A – from audit

Schedule B: USL Customer Annual Load Accuracy Declaration

I declare that Hydro Ottawa's records below for our un-metered load connected to its distribution system are accurate as of the dates provided.

[List of equipment and details per HOL's record]

I declare the following additions or deletions to the load at the HOL supply points listed below during the time period herein stated.

[list of supply points, load, addition /deletion, date]

Reporting Period: _____

Corporation:

_____

Name:
Title:
Date:

I have authority to bind the Corporation

Submit in PDF format to HOL. It is the responsibility of the USL customer to ensure that HOL has acknowledged receipt of the declaration.

Schedule C - Un-metered Electrical Supply Bus Usage Agreement

THIS AGREEMENT made in triplicate this day of ,

BETWEEN:

Bus Owner Name
(the "UBO" – un-metered electrical bus owner)

- AND –

Connection Applicant Name
(the "UCA" – un-metered electrical bus connection applicant)

- AND –

HYDRO OTTAWA LIMITED

("Hydro Ottawa")

WHEREAS UCA is requesting an electrical un-metered Secondary Voltage service(s) supplied from Hydro Ottawa through the UBO un-metered electrical bus;

WHEREAS the UBO and the UCA is related by the same company/government/agency by ownership or affiliation;

WHEREAS this agreement does not provide permission for access to the public road allowance, access to Hydro Ottawa's support structure, or land rights;

WHEREAS this agreement is for the use of un-metered electrical energy and not for generation of electrical energy;

AND WHEREAS UCA's connection to the UBO's un-metered electrical bus does not make the UBO an un-licensed electrical distributor as per Ontario Regulation 161-99.

ARTICLE I

DEFINITIONS

In and for the purpose of the Agreement:

I.1. **Affiliate** means a company that is affiliated with another within the meaning of the Canada Business Corporations Act.

I.2 **Business Day** means the hours from 8:00 a.m. to 4:00 p.m., Eastern Time, on the weekdays from Monday to Friday inclusive with the exception of statutory holidays observed by Hydro Ottawa;

I.3. **Conditions of Service** means the published document describing the operating practices and connection policies of Hydro Ottawa as mandated by the Ontario Energy Board through the Distribution System Code and is available on Hydro Ottawa's website www.hydroottawa.com;

I.4. **Demarcation Point** means the electrical point at which the Secondary Voltage supply cables terminate and change ownership between: 1. Hydro Ottawa and the UBO, or 2. the UBO and the UCA. Each UBO / UCA Demarcation Point shall have weatherproof field tagging indicating the change of ownership;

I.5. **Emergency** means any abnormal system condition that requires remedial immediate action to prevent or limit loss of a distribution system or the supply of electricity that could adversely affect the reliability of the electricity system. The electrical context of Emergency includes prevention of loss of life or property;

I.6. **ESA** means the Electrical Safety Authority of Ontario;

I.7. **Governmental Authority** means any government, parliament, legislature or any regulatory authority, agency, commission or a board of any government, parliament or legislature, or any political subdivision thereof, or any court or, without limitation to the foregoing, any other law, regulation or rule making entity or any person acting under the authority of any of the foregoing or any other authority charged with the administration or enforcement of laws;

I.8. **Representatives** in reference to a party, means the party's directors, officers, employees, and agents and contractors;

I.9. **Secondary System** means the electrical equipment operating at the Secondary Voltage;

I.10. **Secondary Voltage** means less than or equal to 750V;

I.11. Words of similar import have reference to this Agreement as a whole and not to any particular article, section, subsection, or clause of the Agreement;

I.12. The singular includes the plural, the plural the singular, and any gender the other gender; and

I.13. Headings are included for convenience and references only and shall not affect the interpretations hereof.

ARTICLE II

UCA'S COVENANTS

II.1. The UCA shall be subject to the terms hereof, Hydro Ottawa's Conditions of Service, and the UBO's standards at the UCA's sole cost;

II.2. The UCA shall apply for permission in writing with both the UBO and Hydro Ottawa in advance of its new connections on the UBO's un-metered electrical bus. The UCA shall provide technical information required by the UBO so that the UBO can assess the individual connection request feasibility.

II.3. Each UCA connection shall be meet the Ontario Electrical Safety Code requirements and shall be approved for its connection by ESA.

II.4. The UCA shall report any changes in writing to its connection with the UBO and Hydro Ottawa within five (5) Business Days.

II.5. The UCA shall have a valid un-metered energy billing account with Hydro Ottawa in good standing.

II.6. The UCA shall have a Municipal Access Agreement, a temporary encroachment permit from the road authority, or legislative rights to install and maintain its equipment within the public road right of way.

II.7. The UCA shall maintain and protect its electrical system is good working order.

II.8. The UCA shall have accurate records of its electrical system location, loads, and its Demarcation Point.

II.9. The UCA shall meet the UBO standards for the UCA's connection on the UBO's un-metered electrical bus.

II.10. The UCA shall not make or break a connection on the UBO or Hydro Ottawa's un-metered electrical bus.

II.11 The UCA shall not allow other un-metered customers that are related by the same company/government/agency by ownership or affiliation, to connect to its un-metered electrical bus without a similar agreement with Hydro Ottawa.

II.12 The UCA acknowledges that use of the un-metered electrical energy from the UBO's un-metered electrical bus on an as-is basis and the UBO and Hydro Ottawa shall not be liable for the reliability or power quality of the energy provided.

II.13 As UCA Representative changes occur, the UCA shall provide Hydro Ottawa with the required local UCA contacts for:

a. Planned field installations, adjustments, and removals,

b. 24/7 emergency response to repair, adjust, and remove attachments due to emergency work.

ARTICLE III

UBO'S COVENANTS

III.1. The UBO shall be subject to the terms hereof, Hydro Ottawa's Conditions of Service, at the UBO's sole cost.

III.2. The UBO shall apply for permission in writing with Hydro Ottawa in advance of its new connections.

III.3. Each UBO connection shall be meet the Ontario Electrical Safety Code requirements and shall be approved for its connection by ESA.

III.4. The UBO shall report any changes in writing to its connection with Hydro Ottawa within five (5) Business Days.

III.5. The UBO shall have a valid un-metered energy billing account with Hydro Ottawa in good standing.

III.6. The UBO shall have a Municipal Access Agreement, a temporary encroachment permit from the road authority, or legislative rights to install and maintain its equipment within the public road with of way.

III.7. The UBO shall maintain and protect its electrical system is good working order.

III.8. The UBO shall have accurate records of its electrical system location, loads, and its Demarcation Point.

III.9. The UBO shall make and break the UCA connections with its competent Representative on its un-metered electrical bus provided that the UAC has provided reasonable written notice to the UBO.

III.10. The UBO shall not make or break a connection on Hydro Ottawa's un-metered electrical bus.

III.11 The UBO shall not allow other un-metered customers that are not related by the same company/government/agency by ownership or affiliation, to connect to its un-metered electrical bus unless authorized by the Ontario Energy Board. The UBO may allow other un-metered customers that are related by the same company/government/agency by ownership or affiliation, to connect to its un-metered electrical bus by executing this agreement with Hydro Ottawa.

III. 12 As UBO Representative changes occur, the UBO shall provide Hydro Ottawa with the required local UBO contacts for:

a. Planned field installations, adjustments, and removals,

b. 24/7 emergency response to repair, adjust, and remove attachments due to emergency work.

ARTICLE IV

HYDRO OTTAWA'S COVENANTS

IV.1. Hydro Ottawa shall be subject to the terms hereof and its Conditions of Service.

IV.2. Hydro Ottawa shall not connect the UBO or allow connection of the UCA without approval from ESA for their new or modified electrical connections.

IV.3. Hydro Ottawa shall maintain and protect its electrical system is good working order.

IV.4. Hydro Ottawa shall bill the UBO and UCA for use of their un-metered energy as a result of this Agreement through UBO and UCA's un-metered energy account(s) with Hydro Ottawa.

IV.5. Hydro Ottawa may break the UCA connection on the UBO's un-metered electrical bus during an Emergency, when the UCA is in arrears for its energy account(s) with Hydro Ottawa, or when ordered by a Governmental Authority. Hydro Ottawa shall notify the UBO and the UCA of such disconnection.

IV.6. Hydro Ottawa shall respond to the UCA unplanned outage notification (see Hydro Ottawa Un-metered Outage Protocol – ECS0025). If the outage is with Hydro Ottawa's system, it will proceed to rectify the electrical supply. If the outage is not from Hydro Ottawa's system, the UCA is to contact the UBO's Representative to coordinate the investigation and repairs(s) as required.

ARTICLE V

RIGHT OF TERMINATION

V.1. Hydro Ottawa shall be entitled to terminate this Agreement by notice in writing to the UBO and the UCA, in the opinion of Hydro Ottawa, is in substantial breach of this Agreement and fails to rectify such breach within thirty (30) Business Days of notice in writing delivered to him by Hydro Ottawa or fails to commence such rectification within the said time and proceed with dispatch to its completion or if the breach cannot reasonably be rectified within thirty (30) Business Days.

V.2. Any Governmental Authority with jurisdiction of any or all parts of this Agreement shall be entitled to terminate this Agreement by notice in writing.

V.3 The UBO can terminate any UCA connections do to re-arrangements or additional capacity requirements with the UBO's un-metered bus with ninety (90) days written notice to the UAC and Hydro Ottawa. On such a termination, the UCA may request a supply point directly from Hydro Ottawa.

V.4 If for whatever reason the UBO and the UCA relationship by the same company/government/agency by ownership or affiliation ceases, the UCA notify Hydro Ottawa within thirty (30) Business Days and remove all of its electrical connections from the UBO's un-metered electrical bus within 180 Business Days.

ARTICLE VI

NOTICE

VI. 1. Any notice required or contemplated by this Agreement shall be in writing and shall be conclusively deemed to have been given to the party to whom it is addressed if the same is mailed by registered mail, post prepaid as follows:

(a) to Hydro Ottawa if delivered or mailed by prepaid post addressed to Hydro Ottawa at:

1970 Merivale Road
Ottawa, Ontario
K2G 6Y9

Attention: Director, Distribution Asset Management

(b) to the UBO if delivered or mailed by prepaid post addressed to the UBO at:

Attention:

(c) to the UCA if delivered or mailed by prepaid post addressed to the UCA at:

Attention:

VI.2. Each party has the right to change its address for the purpose of servicing notices and invoice by notice to the other at the address then in force.

ARTICLE VII

TERM OF AGREEMENT

Time shall be the essence of this Agreement. The term of this Agreement shall be from the date of execution to the Termination date and the payment of all Hydro Ottawa costs.

ARTICLE VIII

ASSIGNS AND SUCCESSORS

VIII.1. This Agreement and all covenants, conditions, and provisions herein contained shall enure to the benefit of and be binding upon each of the parties hereto and their respective heirs, executors, administration, successors and permitted assigns.

VIII.2. No Party may assign this Agreement without the prior written consent of the others, not to be unreasonably withheld. Any assignment without such consent will be void and of no effect.

ARTICLE IX

GOVERNING LAW

IX.1. This Agreement and the rights of the parties hereto hereunder shall be governed by and construed according to the laws of the Province of Ontario and the federal laws of Canada applicable therein.

IX.2. If any item of this Agreement shall be found to be unlawful, such term shall be deemed to be severable and the remainder of this Agreement shall be and remain in full force and effect.

ARTICLE X

NO PARTNERSHIP / JOINT VENTURE / AGENCY

The parties expressly disclaim any intention to create a partnership, joint venture or agency. It is understood and agreed that nothing contained in this Agreement nor any acts of any party will constitute or be deemed to constitute neither the parties as partners or joint venturers nor any party as agent of the other for any purpose.

IN WITNESS THEREOF the parties hereto have caused this Agreement to be executed by their respective representatives duly authorized in that behalf.

UBO:

Name:

Title:

Date:

I have authority to bind the Corporation

UCA:

Name:

Title:

Date:

I have authority to bind the Corporation

Hydro Ottawa Limited

Name:

Title:

Date:

I have authority to bind the Corporation