

## Smart Grid Advisory Committee

### Storage Working Group Report

The following energy storage matrix and associated regulatory changes and responsibilities has been generated in order to attempt to start to resolve regulatory barriers to energy storage in the province of Ontario and ensure that energy storage services are encouraged and treated equitably, regardless of ownership. In no way are the scenarios intended to be exhaustive of all current and future energy storage services, arrangements, and regulatory issues. The scenarios were, instead, generated in an attempt to address situational concerns of stakeholders and should be subject to the general principles outlined below. We anticipate that, in the future, project opportunities may include a combination of scenarios into hybrid projects that may trigger additional examination of potential regulatory barriers. Further, we anticipate innovation to optimize existing and contemplated energy storage and other existing energy infrastructure investments in the province. There are four (4) key principles that we have attempted to reflect throughout this document, which was intended to contemplate the main types of energy storage service scenarios that may exist in the Ontario energy context.

- First, the charges and regulatory treatment of energy storage should align with the services being provided by the energy storage assets and not the ownership/operation/contractual arrangement that governs the assets. Further, with regards to recommendations set out in the matrix exempting certain scenarios from specific electricity charges, any regulatory changes should minimize opportunities for gaming of the rules.
- Second, system benefits, values and services that result from energy storage (the value of which is not recognized in the current regulatory treatment of energy storage) should be included in the cost causation principles and the allocation of costs and benefits associated with energy storage services that we have attempted to reflect in the overarching regulation and regulatory changes that are set out in the matrix.
- Third, the system should encourage ongoing innovation in energy storage in light of Ontario's leadership role, the ability for energy storage to optimize the efficiency of existing Ontario energy assets, infrastructure investments, energy markets, and conservation in the Province.
- Fourth, energy storage is unique. While it may at times have characteristics of a generator or a load, (or a distribution/transmission asset class), or further as a customer or utility conservation and demand management tool - its inherent flexibility, benefits, and differences may warrant unique, but equitable treatment.

It is noteworthy that a number of the recommended solutions to existing regulatory barriers to storage may be quickly resolvable, others may require further time. We acknowledge that Ontario is currently in the early stages of energy storage deployment, as a result some of the proposed preferred end-state solutions and accompanying rationales will be informed by the energy storage procurements and the proposed energy storage study that is being undertaken by the Government. As a result, the members of the storage working group have in a number of circumstances recommended a contractual short term fix for the Government's proposed procurement of 50 MW of energy storage by the IESO and OPA in 2014. In no way should these proposed short term fixes alter the proposed energy storage study and valuation of the costs and benefits of storage that is being undertaken by the Government - and such evaluation should fairly be undertaken without the inefficiencies and economic impact caused by the current regulatory barriers outlined below. In these principles, we have also attempted to address situations where a licensed distributor or transmitter that is licensed by the Ontario energy board is operating, owning or contracting for storage assets or services exclusively for the use of its respective distribution or transmission system asset - with no broader participation in the energy market. In doing so, we assume that s.71(3) of the Ontario Energy Board Act has been interpreted to apply to all energy storage and not simply the natural gas storage that was existing at the time that this provision was enacted. In doing so, we fully acknowledge that it is our goal to maximize and optimize the efficiency and operation of any and all energy storage assets to achieve the full benefits to the system. As a result, we have also attempted to address two scenarios which relates to the potential merchant operation of energy storage in the Ontario marketplace. Specifically, scenario six and seven reflects the potential for merchant storage operations by various stakeholders.

It is our intention to work with stakeholders in attempt to achieve an equitable outcome and ensure that relevant stakeholders benefit from the operation and optimization resulting from energy storage and are not burdened by the costs to remove the many regulatory barriers that currently exist to the efficient development and operation of energy storage in Ontario.

Recognizing that this document is only a first step toward resolving the barriers to energy storage, the working group recommends the following "next steps" should be undertaken:

- In the short term, to avoid delaying storage projects that will both provide benefits to the electricity system and opportunities for learning about the services storage can provide, entities contracting for storage services and project proponents should overcome as many barriers as possible through the terms of their contracts instead of waiting for these barriers to be removed.
- The OEB, Ministry of Energy and the IESO, as the entities responsible for various parts of the regulatory framework, should initiate processes to investigate resolving one or more of the barrier(s) identified in the matrix. To the extent it is needed, some coordination of these processes might be useful.
- The structure of a business case for storage should be developed.
- Any unique scenarios that may exist should be identified in order to assess how best to deal with issues that are only applicable to them.
- The Smart Grid Advisory Committee should address regulatory barriers that have impacts not just on storage, but also on other areas such as demand response, conservation and data access, Similarly, as more is learned from the energy storage procurements, the Smart Grid Advisory Committee should also identify and address barriers to 'hybrid scenarios' for storage that emerge.

**IESO Responsibility**

**Ministry of Energy Responsibility**

**OEB Responsibility**

Scenario	Regulatory Structure	Licensing (OEB, Gov't)	Customer Classification (OEB)	Demand Charges (OEB)	Global Adjustment Mechanism (GAM) (Gov't)	Debt Retirement Charge (Gov't)	Uplift and Related Non-energy Settlement Charges (IESO)	Market Rules (IESO) Non-energy Settlement Charges	Net-Metering (Gov't)	Rate-based asset / criteria for Board approval (OEB)	Safety Codes and Regulations (ESA)	Standby Charges/Rate Class (OEB)
<p>Scenarios 1 &amp; 2:</p> <p>1. Stand-alone (and Non-Dx/Tx owned) storage facility with IESO/OPA contract to provide <b>ancillary</b> services (e.g. regulating or operating reserve)</p> <p>2. Stand-alone (and Non-Dx/Tx owned) storage facility with IESO/OPA contract to provide <b>non-ancillary</b> services (e.g. capacity or congestion management).</p>	Current Structure	<p>License is required in order to provide ancillary services. However, this is offered under a generation licence. There is no "storage" licence class.</p> <p>No clear licence requirement for non-ancillary storage.</p> <p>Concern: Not clear whether 500kW licence exemption applies to storage facilities per O. Reg. 161/99.</p>	Treated as load customer.	Based on peak demand (kW) treated as load customer.	Providers of ancillary services exempt from paying GAM per O. Reg. 398/10.	Applicable.	Applicable. Chapter 9 Market Rules	May apply as per Chapter 9 Market Rules	Under current O. Reg. 541/05: Only renewable generation eligible for net metering treatment. And program designed for electricity primarily for the generator's own use.	N/A	OESC is applicable	N/A
	Potential Future Structure	<p>Energy storage specific license.</p> <p>Apply 500kW threshold licence exemption to storage facilities.</p>	Energy storage specific customer classification and rate structure.	<p>Dx connection: TX demand charges at a proxy, no Dx demand charges.</p> <p>Tx connected: Tx/Dx exempt.</p> <p>OEB Compliance bulletin/Rate Handbook charge(?)</p>	For both ancillary and non-ancillary contracts GAM should not apply to energy not consumed.	DRC should not apply to energy not consumed.  Amend Reg. 493/01 (ss3) to ensure that storage is exempt (and thereby outside of Chapter 9 of Market Rules.	Uplift should not apply to energy not consumed.  IESO clarification bulletin.  Consumers wholesale storage services should not attract retail charges. In many cases storage is an alternative to support increased efficiency in renewable generation should thereby decrease charges that go into GAM.	Non-energy settlement charges should not apply to energy not consumed.	Would not be required if all demand/GAM/DRC/uplift/non-energy settlement charges are addressed	N/A	OESC is applicable	N/A

Scenario	Regulatory Structure	Licensing (OEB, Gov't)	Customer Classification (OEB)	Demand Charges (OEB)	Global Adjustment Mechanism (GAM) (Gov't)	Debt Retirement Charge (Gov't)	Uplift and Related Non-energy Settlement Charges (IESO)	Market Rules (IESO) Non-energy Settlement Charges	Net-Metering (Gov't)	Rate-based asset / criteria for Board approval (OEB)	Safety Codes and Regulations (ESA)	Standby Charges/Rate Class (OEB)
							Equitable to treatment for certain generators.					
	Options to Achieve Potential Structure	<p>Short-term: Use generation licenses as applicable.</p> <p>Preferred end-state: Government amends OEB Act, section 57(?) and O. Reg. required 161/99 amendment for small storage &lt;50KW.</p> <p>OEB creates a new type of license specific to energy storage. Regulations and regulatory regime reflect new class of storage assets.</p> <p>Rationale for change: Regulatory uncertainty and lack of clarity.</p>	<p>Creation of storage specific customer class, (applicable rates to be determined by contract as per existing IESO 10MW storage procurement and OPA generation procurement.</p> <p>Rationale for change: Storage is neither load nor generator, need to assess its impact on the system and understand cost causation and allocation.</p>	<p>Short-term: Compensation through terms of IESO/OPA contract.</p> <p>Preferred end-state: Tx demand charge exemption on proxy as applicable, based on cost causation principles (e.g., export Tx charge)</p> <p>Dx demand charge exemption. Based on cost causation principles.</p> <p>Rationale for change: 1. Storage providing broader Dx/Tx system benefits (as applicable), optimizing Tx/Dx assets, decreasing losses and thereby benefiting Tx/Dx (or both) customers, facilitating economic exports of clean power as applicable. Costs therefore accrue to entities receiving benefits (i.e. like a capacitor). Equitable treatment of storage regardless of ownership (distributor owned storage currently not required to pay demand charges, distributors may receive CDM</p>	<p>Ancillary services contracts: No change.</p> <p>Non-ancillary contract:</p> <p>Short-term: Compensation through terms of contract.</p> <p>Preferred end-state: Government creates exemption through O. Reg. 398/10. Based on cost causation principles</p> <p>Rationale for change: 1. Storage providers are not truly end-users. Storage providing broader Dx/Tx system benefits (as applicable), optimizing Tx/Dx assets, decreasing losses and thereby benefiting Tx/Dx (or both) customers as applicable. Costs therefore accrue to entities receiving benefits (i.e. like a capacitor). Equitable treatment of storage regardless of ownership (distributor owned storage currently not required to pay demand charges.) This is also completely consistent with the</p>	<p>Short-term: Compensation through terms of contract.</p> <p>Preferred end-state: Government creates exemption through O. Reg. 493/01</p> <p>Rationale for change: 1. Storage does not fit into the true classification of an end-user in section and is more akin to an exempt entity as it responds to IESO/OPA direction on when to operate and how in a very flexible manner. Storage provides broader Dx/Tx system benefits (as applicable), optimizing Tx/Dx assets, decreasing losses and thereby benefiting Tx/Dx (or both) customers as applicable. Costs therefore accrue to entities receiving benefits (i.e. like a capacitor). Equitable treatment of storage regardless of ownership (distributor owned storage currently not required to pay demand charges.)</p> <p>2. Where it is shown that storage</p>	<p>Short-term: Compensation through terms of contract.</p> <p>Preferred end-state: IESO Market rule amendment/Chapter 9 and/or IESO clarification bulletin.</p> <p>Rationale for change: 1. Storage providing broader Dx/Tx system benefits (as applicable), optimizing Tx/Dx assets, decreasing losses and thereby benefiting Tx/Dx (or both) customers as applicable. Costs therefore accrue to entities receiving benefits (i.e. like a capacitor). Equitable treatment of storage regardless of ownership (distributor owned storage currently not required to pay demand charges.)</p> <p>2. Where it is shown that storage clearly is intended to reduce current operating costs and going forward infrastructure costs for all customers in either Tx or Dx or both charging this facility with existing infrastructure costs for energy not consumed is counterproductive.</p>	May apply in scenario #3.	N/A	OESC is applicable	N/A	

Scenario	Regulatory Structure	Licensing (OEB, Gov't)	Customer Classification (OEB)	Demand Charges (OEB)	Global Adjustment Mechanism (GAM) (Gov't)	Debt Retirement Charge (Gov't)	Uplift and Related Non-energy Settlement Charges (IESO)	Market Rules (IESO) Non-energy Settlement Charges	Net-Metering (Gov't)	Rate-based asset / criteria for Board approval (OEB)	Safety Codes and Regulations (ESA)	Standby Charges/Rate Class (OEB)	
				<p>payments for storage that private storage is not eligible for.)</p> <p>2. Where it is shown that storage clearly is intended to reduce current operating costs and going forward infrastructure costs for all customers in either Tx or Dx or both charging this facility with existing infrastructure costs for energy not consumed is counterproductive.</p>	<p>treatment of ancillary services (exempt) in Reg. 398/10 ).</p> <p>2. Where it is shown that storage clearly is intended to reduce going forward generation infrastructure costs for all customers in either Tx or Dx or both charging this facility with existing generation costs is counterproductive.</p>	<p>clearly is intended to reduce going forward infrastructure costs for all customers and to the extent that it is not "consuming" energy, charging this facility with existing DRC costs is counterproductive.</p>							
<p>Scenario 3: Load customer-owned storage facility that is behind-the-meter (BtM). Storage energy is primarily for customer's own use, but occasional injection of power back into the system.</p>	Current Structure	Same as non-ancillary (see above).	Treated as load customer with net billing.	Based on peak demand (kW) treated as load customer.	Applicable.	Applicable.	Applicable.	No change.	Under current O. Reg. 541/05 only renewable generation eligible for net metering treatment. It is not clear whether storage facility would count against 500kW limit for net metering.	Same as above.		The decision to apply standby charges is at the discretion of the utility.	
	Potential Future Structure		No change.									Make storage eligible as part of net metering system.	Consistency with generation.
	Options to Achieve Potential Structure		No change.									Government amends 541/05 to clarify role of storage in net metering systems, or create new storage-specific regulation.	Via OEB's Standby rate-load displacement consultation
<p>Scenario 4: Load customer-owned BtM storage facility for customers' own use (i.e. load displacement/self-generation). Only withdraws power. No power injected back into the Tx/Dx system.</p>	Current Structure	No license required.										N/A	Same as above.
	Potential Future Structure	No change.	No change.									N/A	

Scenario	Regulatory Structure	Licensing (OEB, Gov't)	Customer Classification (OEB)	Demand Charges (OEB)	Global Adjustment Mechanism (GAM) (Gov't)	Debt Retirement Charge (Gov't)	Uplift and Related Non-energy Settlement Charges (IESO)	Market Rules (IESO) Non-energy Settlement Charges	Net-Metering (Gov't)	Rate-based asset / criteria for Board approval (OEB)	Safety Codes and Regulations (ESA)	Standby Charges/Rate Class (OEB)
	Options to Achieve Potential Structure	No change.							N/A			
Scenario 5:  Dx/Tx owned/operated/contracted storage: Exclusively used as system asset. No participation in markets.	Current Structure	<p><b>Not applicable to rate-based assets.</b></p> <p><b>As a result, this is consistent with the above-mentioned scenario recommendations in order to ensure an equitable outcome, ongoing system visibility, no additional regulatory burden for privately owned storage, and ongoing innovation in energy storage</b></p>								<p><b>Rate case: OEB evaluates using evaluation criteria from Smart Grid Directive.</b></p> <p><b>For Dx owned –</b></p> <ul style="list-style-type: none"> <li>if the storage facility is deemed “distribution assets” by the OEB. Exempt from the OESC and Reg 22/04 is applicable.</li> </ul> <p><b>For Tx owned –</b></p> <ul style="list-style-type: none"> <li>if the storage facility is deemed “Transmission assets” by the OEB. Exempt from the OESC.</li> </ul>	N/A	
	Potential Future Structure	No change.									<p><b>Same as above.</b></p>	N/A

Scenario	Regulatory Structure	Licensing (OEB, Gov't)	Customer Classification (OEB)	Demand Charges (OEB)	Global Adjustment Mechanism (GAM) (Gov't)	Debt Retirement Charge (Gov't)	Uplift and Related Non-energy Settlement Charges (IESO)	Market Rules (IESO) Non-energy Settlement Charges	Net-Metering (Gov't)	Rate-based asset / criteria for Board approval (OEB)	Safety Codes and Regulations (ESA)	Standby Charges/Rate Class (OEB)
	Options to Achieve Potential Structure									No change.	Same as above.	N/A
Scenario 6:  Dx/Tx owned/operated/contracted storage.  No rate-basing and not deemed system asset. Recovery entirely through ancillary/non-ancillary services/merchant.	Current Structure	<p>Similar/Same as Scenarios 1 &amp; 2.</p> <p>Assumes OEB Act s. 71(3) relief from restrictions on energy distributors and transmitters applies to all energy storage and not just natural gas storage.</p>								<p>Lack of clarity regarding Dx ownership of "energy storage facility" per OEB Act (section 71(3)) and OEB Compliance Bulletin re section 71(3).</p>	<p><b>For Dx owned</b> –</p> <ul style="list-style-type: none"> <li>If not deemed "distribution assets", OESC applicable (similar to a generator facility)</li> </ul> <p><b>For Tx owned –</b></p> <ul style="list-style-type: none"> <li>If not deemed "Transmission assets", OESC is applicable</li> </ul> <p>• Although this is based on current regulations interpretation, it will need to be explicitly stated to avoid any misinterpretation</p>	N/A

Scenario	Regulatory Structure	Licensing (OEB, Gov't)	Customer Classification (OEB)	Demand Charges (OEB)	Global Adjustment Mechanism (GAM) (Gov't)	Debt Retirement Charge (Gov't)	Uplift and Related Non-energy Settlement Charges (IESO)	Market Rules (IESO) Non-energy Settlement Charges	Net-Metering (Gov't)	Rate-based asset / criteria for Board approval (OEB)	Safety Codes and Regulations (ESA)	Standby Charges/Rate Class (OEB)
	Potential Future Structure									Clarify Dx ownership of storage.	Same as above.	N/A
	Options to Achieve Potential Structure									Government amend: OEB Act (section 71(3))  OEB update Compliance Bulletin re section 71 (3).	Same as above	N/A
Scenario 7:  Merchant storage facility (i.e. no contract with IESO or OPA). Engages in price arbitrage and/or bilateral contract(s) with market participants.	Current Structure	<b>Same as Scenario 2. TDB re demand charge</b>										N/A
	Potential Future Structure											N/A
	Options to Achieve Potential Structure											N/A

## APPENDIX

### DEFINITION & TERMS:

#### Electricity Act, 1998

[http://www.e-laws.gov.on.ca/html/statutes/english/elaws\\_statutes\\_98e15\\_e.htm](http://www.e-laws.gov.on.ca/html/statutes/english/elaws_statutes_98e15_e.htm)

“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; (“procure”)

- No existing definition for electricity storage in (while it is mentioned in the SG Directive only gas storage is mentioned in legislation/regulations).
- To the extent that storage provides ancillary services, it could fall under generation as currently defined.

#### Ontario Energy Board Act, 1998

[http://www.e-laws.gov.on.ca/html/statutes/english/elaws\\_statutes\\_98o15\\_e.htm](http://www.e-laws.gov.on.ca/html/statutes/english/elaws_statutes_98o15_e.htm)

#### **71(3) Exception**

(3) Despite subsection (1), a distributor may own and operate,

- (a) a renewable energy generation facility that does not exceed 10 megawatts or such other capacity as may be prescribed by regulation and that meets any criteria that may be prescribed by the regulations;
- (b) a generation facility that uses technology that produces power and thermal energy from a single source and that meets any criteria that may be prescribed by the regulations; or
- (c) a facility that is an energy storage facility and that meets any criteria that may be prescribed by the regulations. 2009, c. 12, Sched. D, s. 11; 2011, c. 1, Sched. 4, s. 1.

No definition to “*energy storage facility*” provided. This origin of reference was regarding gas storage facilities rather than electricity storage.

Reference to “energy storage facility” repeated in OEB’s “Compliance Bulletin - Application of s. 71(3) of OEB Act” which provides guidance in relation to issues associated with the application of section 71(3) of the *Ontario Energy Board Act, 1998*, regarding the ownership and operation of generation and energy storage facilities by electricity distributors.

### LICENCES:

#### Legislation

[http://www.e-laws.gov.on.ca/html/statutes/english/elaws\\_statutes\\_98o15\\_e.htm](http://www.e-laws.gov.on.ca/html/statutes/english/elaws_statutes_98o15_e.htm)

#### **Ontario Energy Board Act, 1998: PART V, REGULATION OF ELECTRICITY**

From the definitions section 56:

- “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; (“services accessories”)
- “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; (“procure”)
- “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; (“installation de production”)



## Requirement to hold licence

57. Neither the OPA nor the Smart Metering Entity shall exercise their powers or perform their duties under the *Electricity Act, 1998* unless licensed to do so under this Part and no other person shall, unless licensed to do so under this Part,

- (a) own or operate a distribution system;
- (b) own or operate a transmission system;
- (c) generate electricity or provide ancillary services for sale through the IESO-administered markets or directly to another person;
- (c.1) engage in unit sub-metering;
- (d) retail electricity;
- (e) purchase electricity or ancillary services in the IESO-administered markets or directly from a generator;
- (f) sell electricity or ancillary services through the IESO-administered markets or directly to another person, other than a consumer;
- (g) direct the operation of transmission systems in Ontario;
- (h) operate the market established by the market rules; or
- (i) engage in an activity prescribed by the regulations that relates to electricity. 1998, c. 15, Sched. B, s. 57; 2002, c. 1, Sched. B, s. 6; 2004, c. 23, Sched. B, s. 10; 2006, c. 3, Sched. C, s. 4; 2010, c. 8, s. 38 (8).

O Reg 161/99 s. 4.0.3.3(1) provides the exemption. It reads:

4.0.3.3 (1) The following provisions of the *Act* do not apply to a generator that owns or operates a generation facility that has a name plate capacity of 500 kilowatts or less:

1. Clause 57 (c).
2. Clause 57 (f) and section 81, if the generator is a party to a contract with the OPA for the sale of electricity and the contract is entered into as part of a standard offer program offered by the OPA. O. Reg. 531/06, s. 1.

The sections of the *Ontario Energy Board Act*, SO 1998 c 15 S B referenced above read as follows:

57. Neither the OPA nor the Smart Metering Entity shall exercise their powers or perform their duties under the *Electricity Act, 1998* unless licensed to do so under this Part and no other person shall, unless licensed to do so under this Part,

[...]

(c) generate electricity or provide ancillary services for sale through the IESO-administered markets or directly to another person;

(c.1) engage in unit sub-metering;

[...]

(f) sell electricity or ancillary services through the IESO-administered markets or directly to another person, other than a consumer [...].

[...]

81. No generator or affiliate of a generator shall acquire an interest in a transmission or distribution system in Ontario, construct a transmission or distribution system in Ontario or purchase shares of a corporation that owns a transmission or distribution system in Ontario unless it has first given notice of its proposal to do so to the Board and the Board,

(a) has not issued a notice of review of the proposal within 60 days of the filing of the notice; or

(b) has approved the proposal under section 82. 1998, c. 15, Sched. B, s. 81.

### **OEB Licencing**

<http://www.ontarioenergyboard.ca/OEB/Industry/Licences/Apply+for+a+Licence>

The OEB issues the following licenses, there is no “storage” specific licence:

- Distribution Licence
- Transmission Licence
- Generation Licence (includes Standard Offer and Feed-in Tariff Programs)
- Electricity Retailer Licence
- Wholesaler Licence
- Unit Sub-Metering Licence
- Other Electricity Licences (i.e., the IESO, OPA, and Smart Metering Entity)
- Gas Marketer Licence

### **Ontario Electrical Safety Code – Scope**

This Code does not apply to

(a) electrical equipment and electrical installations used exclusively in the generation, transmission, or distribution of electrical power or energy intended for sale or distribution to the public as specified in items (i), (ii) or (iii), except where the Ontario Energy Board require an authorization to connect from the inspection department in accordance with Part V of the Ontario Energy Board Act, 1998.

i. the distributor is licensed to own or operate the distribution system under Part V of the Ontario Energy Board Act, 1998;

ii. the transmitter is licensed to own or operate the transmission system under Part V of the Ontario Energy Board Act, 1998; or

iii. the generator is licensed to own or operate the generation system or is licensed to provide ancillary services for sale through the IESO-administered markets or directly to another person, under Part V of the Ontario Energy Board Act, 1998;

Appendix B note to Subrule (a):

Where Codes issued by the Ontario Energy Board under Part V of the Ontario Energy Board Act, 1998, requires a connection authorization, this Code applies to electrical installations specified in Subrule (a). Codes issued by the Ontario Energy Board can be referenced on the Ontario Energy Board website

## **ONTARIO REGULATION 22/04 - ELECTRICAL DISTRIBUTION SAFETY**

### **Application**

2. (1) Subject to subsection (2), this Regulation applies with respect to distribution systems regardless of when they came into existence.

### **GLOBAL ADJUSTMENT:**

[http://www.e-laws.gov.on.ca/html/source/regs/english/2010/elaws\\_src\\_regs\\_r10398\\_e.htm](http://www.e-laws.gov.on.ca/html/source/regs/english/2010/elaws_src_regs_r10398_e.htm)

O. Reg. 398/10

(3) The IESO shall not allocate any amount for a month to,

- (a) Ontario Power Generation Inc. in respect of the net volume withdrawn from the IESO-controlled grid at the Sir Adam Beck Pump Generating Station;
- (b) Fort Frances Power Corporation in respect of the net volume withdrawn by it during the month from the IESO-controlled grid under its physical bilateral contract with Abitibi-Consolidated Hydro Limited Partnership; or
- (c) a market participant in respect of the net volume withdrawn from the IESO-controlled grid in the course of providing ancillary services in accordance with the market rules.

**NET-METERING:**

[http://www.e-laws.gov.on.ca/html/source/regs/english/2005/elaws\\_src\\_regs\\_r05541\\_e.htm](http://www.e-laws.gov.on.ca/html/source/regs/english/2005/elaws_src_regs_r05541_e.htm)

**Application**

2. (1) Subject to sections 3 and 4, at the request of an eligible generator and in the circumstances and manner described in this Regulation, a distributor,

- (a) shall allow the eligible generator to return eligible electricity for a refund; and
- (b) shall bill the eligible generator on a net metering basis.

(2) To be eligible to be billed on a net metering basis, an eligible generator must return eligible electricity to the distributor by conveying eligible electricity into the distributor's distribution system.

(3) For the purposes of this Regulation, billing on a net metering basis is calculated in accordance with section 8 by subtracting the value of the amount of eligible electricity returned by the eligible generator from the value of the amount of electricity consumed from the system by the eligible generator.

**Eligible generator**

7. (1) A generator of electricity is an eligible generator if,

- (a) the generator generates the electricity primarily for the generator's own use;
- (b) the generator generates the electricity solely from a renewable energy source;
- (c) the maximum cumulative output capacity of the equipment used to generate the electricity that the generator intends to return to the distributor for net metering purposes is no greater than 500 kilowatts based on the rated maximum output capacity of the equipment; and
- (d) the generator conveys the electricity that is generated directly from the point of generation to another point for the generator's own consumption without reliance on the distributor's distribution system before conveying any electricity that is in excess of the generator's own needs at the time of generation into the distributor's distribution system.

(2) In this Regulation, electricity is generated from a renewable energy source if the electricity is generated from the wind, a drop in water elevation, solar radiation or an agricultural bio-mass resource or from any combination of them.

**DEBT RETIREMENT CHARGE:**

[http://www.e-laws.gov.on.ca/html/regs/english/elaws\\_regs\\_010493\\_e.htm](http://www.e-laws.gov.on.ca/html/regs/english/elaws_regs_010493_e.htm)

**Definitions**

1. (1) In this Regulation,  
"exempt self-generated electricity" means electricity,

- (a) that is consumed by the person who generates it or by another person at the expense of the person who generates it, and
- (b) that is,
  - (i) generated and consumed on a temporary, occasional or emergency basis,
  - (ii) generated by a generation unit that has a maximum load capacity of not more than 15 kilowatts,
  - (iii) generated and consumed within a vehicle or vessel used to transport people or goods, or
  - (iv) generated in a net metered generation facility by a person who has entered into a net metering agreement with a distributor in respect of electricity generated by that net metered generation facility;

### **Exemptions**

3. (1) The following users are exempt from the requirement to pay debt retirement charges in respect of electricity consumed in the following manner:

- 1. An Indian or band, as defined in the Indian Act (Canada), in respect of electricity consumed by the Indian or the band on a reserve.
- 2. A foreign state, international organization or individual that is exempt from tax under subsection 7 (5) of the Retail Sales Tax Act, in respect of electricity consumed by the foreign state, international organization or individual.
- 3. A transmitter or distributor, in respect of electricity lost or unaccounted for in transmitting or distributing electricity.
- 4. A self-generating user and a person who consumes electricity at the expense of the self-generating user, in respect of exempt self-generated electricity generated by the self-generating user.
- 5. A person, in respect of electricity the person consumes that is generated by a self-generating user and supplied to the person at the expense of the self-generating user. O. Reg. 493/01, s. 3 (1).

(2) Despite subsection (1), an entity mentioned in paragraph 1 or 2 of that subsection is required to pay to a collector the amount of the debt retirement charge that would otherwise be payable under subsection 85 (4) of the Act for a period, unless the entity claiming the exemption submits to the collector to whom the entity is required to pay the debt retirement charge,

- (a) a valid certificate of Indian status issued by the Government of Canada, that identifies him or her as an Indian;
- (b) a valid identity card issued by the Government of Canada that identifies him or her as an individual described in subsection 7 (5) of the Retail Sales Tax Act, in the case of an individual referred to in paragraph 2 of subsection (1); or
- (c) an exemption certificate, in any other case. O. Reg. 493/01, s. 3 (2).

### **Annual exemption, self-generating users**

5. (1) A self-generating user is exempt from the requirement to pay a debt retirement charge for a calendar year in respect of the number of kilowatt hours of electricity that is the lesser of,

- (a) the number of kilowatt hours of electricity in its exemption account at the end of the year; and
- (b) the number of kilowatt hours of self-generated electricity consumed in the year by the self-generating user or by another person at the expense of the self-generating user. O. Reg. 493/01, s. 5 (1); O. Reg. 542/05, s. 4 (1).

(2) Despite subsection (1), a self-generating user is not entitled to an exemption under this section for a year unless,

- (a) the self-generating user,
  - (i) owned or operated generation units or facilities on October 30, 1998 and consumed self-generated electricity generated by those generation units or facilities at any time after December 31, 1988 and before October 31, 1998, or
  - (ii) acquired before the end of the year part or all of an exemption account from a self-generating user who was entitled to it; and

(b) the self-generating user is not entitled to claim an exemption for the year under section 4. O. Reg. 493/01, s. 5 (2); O. Reg. 542/05, s. 4 (2).