

## **Proposed Amendments to the Distribution System Code**

### **Section 1.2 of the Code is amended as follows:**

The definition of “connection” is amended by deleting the phrase “to a customer” at the end of the definition.

The definition of “Connection Agreement” is amended by adding the phrase “or from” on the 3<sup>rd</sup> line after “to” and before “that”.

The definition of “customer” is amended by adding the phrase “or an embedded generation facility” at the end of the first sentence.

The definition of “distribution services” is amended by deleting the phrase “for which a charge or rate has been approved by the Board under section 78 of the Act” at the end of the definition.

The definition of “emergency backup” is amended by changing the definition to a definition of “emergency backup generation facility”;

The definition of “meter service provider” is amended by adding the phrase “or generator” at the end of the definition.

The definition of “embedded generator” or “embedded generation facility” is revoked and replaced with the following:

“embedded generation facility” means a generation facility which is not directly connected to the IMO-controlled grid but instead is connected to a distribution system;

### **The following definitions are added to section 1.2:**

“embedded load displacement generation facility” means an embedded generation facility connected to the customer side of the revenue meter where the generation facility does not inject electricity into the distribution system for the purpose of sale;

“large embedded generation facility” means an embedded generation facility with a name-plate rated capacity of more than 10 MW;

“micro-embedded load displacement generation facility” means an embedded load displacement generation facility with a name-plate rated capacity of 10 kW or less;

“mid-sized embedded generation facility” means an embedded generation facility with a name-plate rated capacity of less than 10 MW and more than 500 kW in the case of a facility connected to a less than 15 kV line and more than 1 MW in the case of a facility connected to a 15 kV or greater line;

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

“small embedded generation facility” means an embedded generation facility which is not a micro-embedded generation facility with a name-plate rated capacity of 500 kW or less in the case of a facility connected to a less than 15 kV line and 1MW or less in the case of a facility connected to a 15 kV or greater line;

**Section 1.7 is amended by adding the following paragraph:**

The amendments to this Code made by the Board on (insert date when made by Board) come into effect three months after this date.

**Section 2.1 is revoked.**

**Section 2.4.4 is revoked.**

Section 2.4.6 is amended by deleting the word “supply” from the 13<sup>th</sup> bullet point after the word “which” and before the phrase “may be interrupted” and replacing it with “service”.

Section 3.1.1 is amended by adding the phrase “including the Ontario Electrical Safety Code” at the end of the 1<sup>st</sup> bullet point, adding the word “materially” at the beginning of the 3<sup>rd</sup> bullet point before the word “Adverse” and deleting the 7<sup>th</sup> bullet point which begins with the word “Discriminatory”.

Section 3.1.3 is amended by deleting the phrase “building or facility” in the 1<sup>st</sup> line and replacing it with “customer”.

**Chapter 3 is amended by adding the following new sections:**

3.2.5.1 The amount a distributor may offer to charge a generator to construct the expansion to connect a generation facility to the distributor’s distribution system shall not exceed the generator’s share of the present value of the projected capital costs and on-going maintenance costs for the equipment. Projected revenue and avoided costs from the generation facility shall be assumed to be zero, unless otherwise determined by rates approved by the Board. The methodology and inputs that a distributor shall use to calculate this amount are presented in Appendix B.

3.2.10 Section 3.2.8 and the 2<sup>nd</sup> sentence of section 3.2.9 do not apply to a customer who is a generator or is proposing to become a generator unless the customer’s proposed or existing generation facility is an emergency backup generation facility.

Section 4.1.7 is amended by adding the phrase “or customer” after “consumer” on the 1<sup>st</sup> and 2<sup>nd</sup> lines and the phrase “or customer’s” after “consumer’s” on the 3<sup>rd</sup> line.

Section 4.1.8 is amended by adding the phrase “or customer” after “consumer” on the 1<sup>st</sup>, 3<sup>rd</sup> and 5<sup>th</sup> lines and adding the phrase “or customer’s” after “consumer’s” on the 2<sup>nd</sup> line.

Section 4.5.4 is amended by adding the phrase “or customers” after “consumers” on the 1<sup>st</sup> line and deleting the phrase “generation equipment” after “emergency” and replacing it with the phrase “backup generation facility”.

Section 4.5.5 is amended by adding the phrase “or customer’s” after “consumer’s” on the 1<sup>st</sup> line and deleting the phrase “generation capability” after “emergency” and replacing it with the phrase “backup generation facility”.

The first sentence of section 6.1 is amended by deleting the phrase “other than embedded generators” after “customers” and replacing it with “other than customers with existing or proposed embedded generation facilities which are not emergency backup generation facilities”.

**Section 6.2 is revoked and replaced with the following:**

## **6.2 Responsibilities to Generators**

6.2.1 Section 6.2 does not apply to the connection or operation of an emergency backup generation facility.

6.2.2 A distributor shall enter into a Connection Agreement with all existing generators who have a generation facility connected to the distributor’s distribution system and prior to connecting a new generation facility.

### **Connection Process**

6.2.3 A distributor shall promptly make available a generation connection information package (the “package”) to any person who requests this package. The package shall contain the following information:

- (a) the process for having a generation facility connected to the distributor’s distribution system, including any form necessary for applying to the distributor;
- (b) any necessary approvals from the ESA, the IMO, OEB, or a Transmitter, before the distributor will connect a generation facility to its distribution system;
- (c) the technical requirements for being connected to the distributor’s distribution system including the metering requirements; and
- (d) the standard contractual terms and conditions for being connected to the

distributor's distribution system.

6.2.4 Subject to all applicable laws, a distributor shall make all reasonable efforts in accordance with the provisions of section 6.2 to promptly connect to its distribution system a generation facility which is the subject of an application for connection.

#### **Connection of Micro-Generation Facilities:**

6.2.5 A distributor shall require a person that applies for the connection of a micro-embedded load displacement generation facility to the distributor's distribution system to provide, upon making the application, the following information:

- (a) the name-plate rated capacity of each unit of the proposed generation facility and the total name-plate rated capacity of the proposed generation facility at the connection point;
- (b) the fuel type of the proposed generation facility;
- (c) the type of technology to be used; and
- (d) the location of the proposed generation facility including address and account number with the distributor where available.

6.2.6 Where the proposed micro-embedded load displacement generation facility is located at an existing customer connection, the distributor shall, within 15 days of receiving the application, make an offer to connect or provide reasons for refusing to connect the proposed generation facility . The distributor shall give the applicant at least 30 days to accept the offer to connect and the distributor shall not revoke the offer to connect until this time period has expired. The distributor shall not charge for the preparation of the offer to connect.

6.2.7 The distributor shall make any necessary metering changes and connect the applicant's micro-embedded load displacement generation facility to its distribution system within 5 days of the applicant informing the distributor that it has received all necessary approvals, providing the distributor with a copy of the authorization to connect from the ESA, entering into a Connection Agreement in the form set out in Appendix E and paying the distributor for the costs of any necessary metering changes.

#### **Connection of Other Generation Facilities**

6.2.8 Sections 6.2.9 to 6.2.20 apply to the connection to a distribution system of an embedded generation facility which is not a micro-embedded load displacement generation facility.

6.2.9 Where a person who is considering applying for the connection of a generation

facility to the distributor's distribution system requests a preliminary meeting with the distributor and provides the required information, the distributor shall provide a time when it is available to meet with the person which is within 15 days of the person requesting the meeting. For the purposes of this section, the following is the required information:

- (a) the name-plate rated capacity of each unit of the proposed generation facility and the total name-plate rated capacity of the generation facility at the connection point;
- (b) the fuel type of the proposed generation facility;
- (c) the type of technology to be used; and
- (d) the location of the proposed generation facility including address and account number with the distributor where available.

6.2.10 At the preliminary meeting, the distributor shall discuss the basic feasibility of the proposed connection including discussing the location of existing distribution facilities in relation to the proposed generation facility and providing an estimate of the time and costs necessary to complete the connection. The distributor shall not charge for its preparation for and attendance at the meeting.

6.2.11 A distributor shall require a person who applies for the connection of a generation facility to the distributor's distribution system to, upon making the application, pay their impact assessment charge and provide the following information:

- (a) the information set out in section 6.2.9 if this has not already been provided to the distributor;
- (b) a single line diagram of the proposed connection; and
- (c) a preliminary design of the proposed interface protection.

6.2.12 The distributor shall provide an applicant proposing to connect a small embedded generation facility with its assessment of the impact of the proposed generation facility, a detailed cost estimate of the proposed connection and an offer to connect within:

- (a) 60 days of the receipt of the application where no distribution system reinforcement or expansion is required; and
- (b) 90 days of the receipt of the application where a distribution system reinforcement or expansion is required.

6.2.13 The distributor shall provide its assessment of the impact of the proposed generation facility within:

- (a) 60 days of the receipt of the application in the case of a proposal to connect a mid-sized embedded generation facility; and
- (b) 90 days of the receipt of the application in the case of a proposal to connect a large generation facility.

6.2.14 The distributor's impact assessment shall set out the impact of the proposed generation facility on the distributor's distribution system and any customers of the distributor including:

- (a) any voltage impacts, impacts on current loading settings and impacts on fault currents;
- (b) the connection feasibility;
- (c) the need for any line or equipment upgrades;
- (d) the need for transmission system protection modifications; and
- (e) any metering requirements.

6.2.15 Any material revisions to the design, planned equipment or plans for the proposed generation facility and connection shall be filed with the distributor and the distributor shall prepare a new impact assessment within the relevant time period set out in section 6.2.13 or 6.2.14.

6.2.16 In the case of an application for the connection of a mid-sized or large embedded generation facility, once the impact assessment is provided to the applicant, the distributor and the applicant have entered into an agreement on the scope of the project and the applicant has paid the distributor for the cost of preparing a detailed cost estimate of the proposed connection, the distributor shall provide the applicant with a detailed cost estimate and an offer to connect by the later of 90 days after the receipt of payment from the applicant and 30 days after the receipt of comments from a transmitter or host distributor.

6.2.17 Where a distributor is preparing a detailed cost estimate in accordance with section 6.2.16 with respect to a proposed large or mid-sized embedded generation facility, the distributor shall advise any transmitter or distributor whose transmission or distribution system is directly connected to the distributor's distribution system that it is preparing an estimate, within 10 days of receiving payment from the applicant. Where a distributor is preparing a detailed cost estimate in accordance with section 6.2.16 with respect to a proposed small embedded generation facility, the distributor shall, where the distributor believes a system directly connected to its system may be impacted by

the proposed generation facility, advise any transmitter or distributor whose transmission or distribution system is directly connected to the distributor's distribution system that it is preparing an estimate, within 10 days of receiving payment from the applicant.

6.2.18 Once the applicant has entered into a connection cost agreement with the distributor and has provided the distributor with detailed engineering drawings with respect to the proposal, the distributor shall conduct a design review to ensure that the detailed engineering plans are acceptable.

6.2.19 The distributor shall have the right to witness the commissioning and testing of the generation facility.

6.2.20 Once the applicant informs the distributor that it has received all necessary approvals, provides the distributor with a copy of the authorization to connect from the ESA and enters into the Connection Agreement, the distributor shall act promptly to connect the generation facility to its distribution system.

6.2.21 Subject to any delays which result from the actions of the applicant or an approval authority, a distributor shall connect a proposed small embedded generation facility within:

a) 60 days of the applicant filing its ESA plan approval where no distribution system reinforcement or expansion is required; and

(b) 180 days of the applicant filing where a distribution system reinforcement or expansion is required.

6.2.22 A Connection Agreement for a small, mid-sized or large embedded generation facility shall be in the form set out in Appendix E where a standard form of contract is set out in Appendix E for that size of embedded generation facility.

6.2.23 Material on the process for connecting a generation facility to a distribution system is set out in Appendix F.1. This material is for information purposes only and the provisions of the Code govern in the case of any conflict.

6.2.24 A distributor may by written agreement with an applicant who is proposing to connect a small, mid-sized or large embedded generation facility provide that the process for connecting the generation facility to be followed is the process set out for a smaller category of embedded generation facility, including a micro-embedded load displacement generation facility.

### **Technical Requirements**

6.2.25 A distributor shall ensure that the safety, reliability and efficiency of the distribution system is not materially adversely effected by the connection of a generation

facility to the distribution system. A distributor shall require that new or significantly modified generation facilities meet the technical requirements specified in Appendix F.2.

6.2.26 A distributor shall ensure that the distribution system is adequately protected from potential damage or increased operating costs resulting from the connection of a generation facility. Despite section 2.2.1, if damage to the distribution system or increased operating costs result from the connection of a generation facility, the distributor shall be reimbursed for these costs by the generator.

6.2.27 A distributor shall require that a generator with a generation facility connected to the distributor's distribution system has a regular, scheduled maintenance plan to ensure that the generator's connection devices, protection systems and control systems are maintained in good working order. This requirement will be provided for in the connection agreement.

6.2.28 All equipment that is connected, operating or procured or ordered before May 1, 2002 is deemed to be in compliance with the technical requirements of this code.

6.2.29 A distributor may require that equipment deemed compliant under section 6.2.28 be brought into actual compliance with the technical requirements of this code within a specific reasonable time period where there is:

- (a) a material deterioration of the reliability of the distribution system resulting from the performance of the generator's equipment;
- (b) a material negative impact on the quality of power of an existing or a new customer resulting from the performance of the generator's equipment; or
- (c) a material increase in generator capacity at the site where the equipment deemed compliant is located.

6.2.30 The distributor may act in accordance with section 6.2.29, once the distributor has developed rules and procedures for requiring equipment to be brought into actual compliance and these rules and procedures have been provided to the generator.

**Appendix E and F are revoked and replaced with a new Appendix E and F appended to this document.**