

IN THE MATTER OF the *Ontario Energy Board Act, 1998*, S.O. 1998, c. 15,
(Schedule B);

AND IN THE MATTER OF an application under section 74 of the *Ontario
Energy Board Act, 1998*, S.O. 1998, c. 15, Schedule B to amend Hydro One
Networks Inc.'s electricity distribution licence.

ASSOCIATION OF POWER PRODUCERS OF ONTARIO (APPrO)

MATERIALS FOR EXAMINATION

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TAB 1

PART I GENERAL

Board objectives, electricity

1. (1) The Board, in carrying out its responsibilities under this or any other Act in relation to electricity, shall be guided by the following objectives:

1. To protect the interests of consumers with respect to prices and the adequacy, reliability and quality of electricity service.
2. To promote economic efficiency and cost effectiveness in the generation, transmission, distribution, sale and demand management of electricity and to facilitate the maintenance of a financially viable electricity industry.
3. To promote electricity conservation and demand management in a manner consistent with the policies of the Government of Ontario, including having regard to the consumer's economic circumstances.
4. To facilitate the implementation of a smart grid in Ontario.
5. To promote the use and generation of electricity from renewable energy sources in a manner consistent with the policies of the Government of Ontario, including the timely expansion or reinforcement of transmission systems and distribution systems to accommodate the connection of renewable energy generation facilities. 2004, c. 23, Sched. B, s. 1; 2009, c. 12, Sched. D, s. 1.

79.1 (1) The Board, in approving just and reasonable rates for a distributor that incurs costs to make an eligible investment for the purpose of connecting or enabling the connection of a qualifying generation facility to its distribution system, shall provide rate protection for prescribed consumers or classes of consumers in the distributor's service area by reducing the rates that would otherwise apply in accordance with the prescribed rules. 2009, c. 12, Sched. D, s. 14.

Distributor entitled to compensation re lost revenue

(2) A distributor is entitled to be compensated for lost revenue resulting from the rate reduction provided under subsection (1) that is associated with costs that have been approved by the Board and incurred by the distributor to make an eligible investment referred to in subsection (1). 2009, c. 12, Sched. D, s. 14.

Consumers' contributions

(3) All consumers are required to contribute towards the amount of any compensation required under subsection (2) in accordance with the regulations. 2009, c. 12, Sched. D, s. 14.

Regulations

- (4) The Lieutenant Governor in Council may make regulations,
- (a) prescribing consumers or classes of consumers eligible for rate protection under this section;
 - (b) prescribing criteria to be met by a qualifying generation facility;
 - (c) prescribing the criteria to be satisfied for an investment to be an eligible investment;
 - (d) prescribing rules for the calculation of the amount of the rate reduction;
 - (e) prescribing maximum amounts of the total annual value of rate protection that may be provided under this section;
 - (f) prescribing rules respecting the amounts that must be collected to compensate distributors, including rules,
 - (i) respecting the calculation of those amounts,
 - (ii) establishing the time and manner of collection,
 - (iii) requiring the amounts to be paid in instalments and requiring the payment of interest or penalties on late payments,
 - (iv) prescribing methods of ensuring that the amounts required cannot be bypassed, and
 - (v) respecting the distribution of the amounts collected;
 - (g) prescribing the powers and duties of the Board in relation to the calculation of amounts to be collected and the time and manner of collection and distribution;
 - (h) respecting any other matter that the Lieutenant Governor in Council considers necessary for the purposes of this section. 2009, c. 12, Sched. D, s. 14.

Definitions

(5) In this section,

"eligible investment" means an investment in the construction, expansion or reinforcement of a distribution line, transformer, plant or equipment used for conveying electricity at voltages

of 50 kilovolts or less that meets the criteria prescribed by regulation; (“investissement admissible”)

“qualifying generation facility” means a generation facility that meets the criteria prescribed by regulation. (“installation de production admissible”) 2009, c. 12, Sched. D, s. 14.

79.2 Repealed: 1998, c. 15, Sched. B, s. 79.2 (5).

79.3 - 79.10 Repealed: 1998, c. 15, Sched. B, s. 79.11.

79.11 Spent: 2003, c. 8, s. 10; 2004, c. 23, Sched. B, s. 24.

79.12 - 79.15 Repealed: 1998, c. 15, Sched. B, s. 79.11.

Ontario Energy Board Act, 1998
Loi de 1998 sur la Commission de l'énergie de l'Ontario

ONTARIO REGULATION 330/09

COST RECOVERY RE SECTION 79.1 OF THE ACT

Consolidation Period: From September 9, 2009 to the e-Laws currency date.

No amendments.

This Regulation is made in English only.

Definitions and interpretation

1. (1) In this Regulation,

“consumer” has the same meaning as in the *Electricity Act, 1998*;

“embedded distributor” means a licensed distributor who is not a market participant and to whom a host distributor distributes electricity;

“embedded generator” means a generator who is not a market participant and whose generation facility is connected to a distribution system of a licensed distributor, but does not include a generator who consumes more electricity than it generates;

“host distributor” means a licensed distributor who is a market participant and who distributes electricity to another licensed distributor who is not a market participant;

“licensed distributor” means a distributor who is licensed under Part V of the Act;

“qualified distributor” means a distributor serving consumers or classes of consumers that are being provided rate protection pursuant to subsection 79.1 (1) of the Act in accordance with this Regulation;

“rate protection” means rate protection under section 79.1 of the Act. O. Reg. 330/09, s. 1 (1).

(2) The prescribed criterion for falling within the definition of an “eligible investment” under subsection 79.1 (5) of the Act is that the costs associated with the investment are determined to be the responsibility of the distributor in accordance with the Board’s Distribution System Code. O. Reg. 330/09, s. 1 (2).

(3) The prescribed criterion for falling within the definition of a “qualifying generation facility” under subsection 79.1 (5) of the Act is that the generation facility satisfies the criteria necessary to be a renewable energy generation facility under the *Electricity Act, 1998*. O. Reg. 330/09, s. 1 (3).

Consumers eligible for rate protection

2. Consumers or classes of consumers are prescribed consumers or classes of consumers for the purposes of subsection 79.1 (4) of the Act if they are served by a licensed distributor that has incurred costs to make an eligible investment that has been approved by an order of the Board. O. Reg. 330/09, s. 2.

Calculation of rate protection

3. (1) The Board shall calculate the annual amount of rate protection to be provided to prescribed consumers or classes of consumers using the following formula:

$$A = B - C$$

where,

A is the amount of rate protection to be provided to prescribed consumers or classes of consumers in a distributor's service area,

B is the costs associated with the eligible investment described in subsection 1 (2), and

C is the amount that the Board determines to represent the direct benefits that accrue to prescribed consumers or classes of consumers as a result of all or part of the eligible investment made or planned to be made by the distributor.

O. Reg. 330/09, s. 3 (1).

(2) The Board shall calculate a monthly amount of compensation, referred to as the distributor's monthly compensation amount, to which each qualifying distributor is entitled, which amount shall be based on the amount calculated under subsection (1). O. Reg. 330/09, s. 3 (2).

(3) Where the Board provides rate protection for a qualified distributor's prescribed consumers or classes of consumers, the Board shall, as often as is necessary and no less frequently than annually, calculate an aggregate monthly compensation amount by aggregating the amounts calculated under subsection (2) for each qualified distributor for each month for which collection is required. O. Reg. 330/09, s. 3 (3).

(4) The Board shall, as often as is necessary and no less frequently than annually, calculate the monthly amount to be collected by the IESO under subsection 4 (2), such that the total amount that is to be collected is equal to the total amount of rate protection that is to be provided. O. Reg. 330/09, s. 3 (4).

(5) The Board shall, as often as is necessary and no less frequently than annually, calculate the amount of the charge to be collected by each distributor under subsection 4 (3) for each kilowatt hour of electricity that is distributed to a consumer or embedded distributor, such that the total forecasted amount that is to be collected is equal to the total amount of rate protection that is to be provided. O. Reg. 330/09, s. 3 (5).

(6) In any year, if the amounts collected by distributors in accordance with subsection (5) are greater or less than the amounts calculated under subsection (3), the excess or shortfall shall be considered by the Board in calculating the amount of the charge that is to be collected by distributors under subsection (5) for the following year. O. Reg. 330/09, s. 3 (6).

(7) Qualified distributors and persons to whom this Regulation applies shall provide the information relating to this Regulation that the Board requires, in a form and within the time

specified by the Board. O. Reg. 330/09, s. 3 (7).

IESO calculation of proportional share

4. (1) On a monthly basis, the IESO shall collect from market participants the amount calculated by the Board under subsection 3 (4) based on each kilowatt-hour of electricity that is withdrawn from the IESO-controlled grid, as determined in accordance with the Market Rules, where the electricity is for the use of consumers within Ontario. O. Reg. 330/09, s. 4 (1).

(2) For the purposes of subsection (1), the IESO shall proportionately charge market participants based on the total of the net volume of electricity withdrawn by the market participants from the IESO-controlled grid during the month and, if the market participant is a licensed distributor, the sum of,

- (a) the total volume of electricity supplied by embedded generators during the month to the market participant, adjusted for losses as required by the Retail Settlement Code; and
- (b) the total volume of electricity supplied by embedded generators during the month to all embedded distributors for whom the market participant is the host distributor, adjusted for losses as required by the Retail Settlement Code. O. Reg. 330/09, s. 4 (2).

(3) On a monthly basis, each distributor shall collect from each consumer in its service area and from each embedded distributor to which it distributes electricity an amount proportionate to the volume of electricity distributed to the consumer or to the embedded distributor, including the total volume of electricity supplied by embedded generators to embedded distributors in the host distributor's service areas in the manner described in clause (2) (b). O. Reg. 330/09, s. 4 (3).

(4) A distributor who bills a consumer from whom the distributor must collect an amount in accordance with subsection (3) shall aggregate the amount that the consumer is required to contribute to the compensation required under subsection 79.1 (2) of the Act and this Regulation with the amount otherwise payable by the consumer in respect of the wholesale market service rate described in the Electricity Distribution Rate Handbook issued by the Board, as it read on May 11, 2005. O. Reg. 330/09, s. 4 (4).

IESO, monthly payments

5. (1) The IESO shall make a monthly payment to each qualified distributor that is equal to the monthly compensation amount determined by the Board under subsection 3 (2), including any payments for an embedded distributor to which the distributor delivers electricity. O. Reg. 330/09, s. 5 (1).

(2) On a monthly basis, a host distributor shall, for each embedded distributor to which the host distributor distributes electricity, adjust the accounts between the host distributor and the embedded distributor by crediting the amount calculated by the Board under subsection 3 (2) to the embedded distributor. O. Reg. 330/09, s. 5 (2).

(3) Payments required by this Regulation between licensed distributors and the IESO may be made, at the option of the IESO, by way of set off in the accounts maintained by the IESO. O. Reg. 330/09, s. 5 (3).

(4) Payments required by this Regulation between an embedded distributor and its host distributor may be made, at the option of the host distributor, by way of set off in the accounts maintained by the host distributor. O. Reg. 330/09, s. 5 (4).

IESO to provide certain information

6. (1) For the purpose of calculating the amounts referred to in subsection 3 (5), at least 60 days before the end of each calendar year the IESO shall submit to the Board,

- (a) a forecast of the number of net kilowatt hours of electricity that are expected to be withdrawn from the IESO-controlled grid, as determined in accordance with the market rules, for use by consumers within Ontario during the IESO's next fiscal year;
- (b) a forecast of the total volume of electricity that is expected to be supplied to distributors and embedded distributors by embedded generators;
- (c) documentation supporting the forecasts referred to in clauses (a) and (b);
- (d) a calculation of the total amount of excess or shortfall held in variance accounts maintained by distributors resulting from the difference between the amounts charged to distributors by the IESO and the amounts collected from consumers by distributors;
- (e) documentation supporting the calculation referred to in clause (d); and
- (f) such other information as the Board may require for the purposes of this Regulation, in the form specified by the Board and before the expiry of the period specified by the Board. O. Reg. 330/09, s. 6 (1).

(2) The forecast referred to in clause (1) (a) shall be derived from information submitted to the Board by the IESO pursuant to section 19 of the *Electricity Act, 1998* in respect of the IESO's next fiscal year. O. Reg. 330/09, s. 6 (2).

(3) At the end of each calendar year, the IESO shall submit to the Board the figures for the total amount of the monthly compensation that was paid out to each qualified distributor for each month of the year. O. Reg. 330/09, s. 6 (3).

(4) Each distributor who is a market participant shall give the IESO such information as the IESO may require from the distributor for the purposes of this Regulation and shall do so in the form specified by the IESO before the expiry of the period specified by the IESO. O. Reg. 330/09, s. 6 (4).

(5) Each embedded distributor shall give its host distributor such information as the IESO may require from the host distributor for the purposes of this Regulation and shall do so in a form specified by the host distributor before the expiry of the period specified by the host distributor. O. Reg. 330/09, s. 6 (5).

Reliance on information

7. (1) For the purposes of this Regulation, the IESO shall rely on the information provided to it by each distributor who is a market participant. O. Reg. 330/09, s. 7 (1).

(2) For the purposes of this Regulation, host distributors shall rely on the information provided to them by their embedded distributors. O. Reg. 330/09, s. 7 (2).

8. Omitted (provides for coming into force of provisions of this Regulation). O. Reg. 330/09, s. 8.

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Electricity Act, 1998
Loi de 1998 sur l'électricité

ONTARIO REGULATION 326/09

MANDATORY INFORMATION RE CONNECTIONS

Consolidation Period: From September 9, 2009 to the e-Laws currency date.

No amendments.

This Regulation is made in English only.

Definitions

1. In this Regulation,

“connection” has the same meaning as in section 1.2 of the Board’s Distribution System Code;

“connection assessment process” means the procedures and the timing associated with each step of the connection process provided for in section 6.2 of the Board’s Distribution System Code;

“connection impact assessment” means a connection impact assessment referred to in section 6.2.12 or 6.2.13 of the Board’s Distribution System Code. O. Reg. 326/09, s. 1.

Connection requirements, distribution systems

2. (1) For the purposes of this Regulation, where a generator is seeking to connect a renewable energy generation facility to a distributor’s distribution system, the distributor shall,

- (a) provide the applicable assessment of the renewable energy generation facility’s connection application provided for in section 6.2 of the Board’s Distribution System Code and shall do so within the time provided in the Code;
- (b) provide the assessment required under clause (a) to the generator within 120 days after the date when the distributor commences the assessment provided for in clause (a), where the applicable connection impact assessment requires the distributor to apply to their host distributor for a connection impact assessment; and
- (c) on behalf of the generator, apply for a connection assessment to the IESO under section 6.1.6 of chapter 4 of the market rules, if the renewable energy generation facility has a name-plate capacity of 10 megawatts or greater. O. Reg. 326/09, s. 2 (1).

(2) Where a distributor makes an application to the IESO under clause (1) (c), the IESO shall provide the distributor with an assessment of the impact or potential impact of the connection on the integrated power system within 150 days after the day the IESO receives the application. O. Reg. 326/09, s. 2 (2).

(3) An application for connection assessment is complete when it contains information sufficient to allow a distributor to carry out its connection assessment activities. O. Reg. 326/09, s. 2 (3).

(4) A distributor shall meet the time requirements for the connection assessment process that are applicable to the generation facility, given its name-plate capacity, when a generator is seeking to connect a renewable energy generation facility to the distributor's distribution system. O. Reg. 326/09, s. 2 (4).

Connection requirements, transmission systems

3. (1) For the purposes of this Regulation, where a generator is seeking to connect a renewable energy generation facility to a transmitter's transmission system, the IESO shall provide, within 150 days after receipt of a complete application for connection assessment,

- (a) the system impact assessment provided for in section 6.1.6 of chapter 4 of the market rules; and
- (b) the customer impact assessment provided for in section 6.4 of the Board's Transmission System Code. O. Reg. 326/09, s. 3 (1).

(2) An application for connection assessment is complete when it contains information sufficient to allow both the IESO and the transmitter to carry out their connection assessment activities. O. Reg. 326/09, s. 3 (2).

Reporting, distributors

4. (1) For the purposes of subsection 25.37 (3) of the Act, the information that the distributor files with the Board shall include,

- (a) the number of connection impact assessments for renewable energy generation facilities with a name-plate capacity of greater than 10 kilowatts and of offers to connect renewable energy generation facilities with a name-plate capacity of 10 kilowatts or less completed or made within the previous quarter; and
- (b) the number of instances where the assessments have not been provided within the time provided for in subsection 2 (1), for each of the connection impact assessments referred to in clause (a) that have been completed by the distributor. O. Reg. 326/09, s. 4 (1).

(2) For the purposes of subsection 25.37 (3) of the Act, a distributor shall provide information, to be updated on at least a quarterly basis, to the public regarding the capacity of the distributor's distribution system to accommodate generation from renewable energy generation facilities, including,

- (a) voltage level;
- (b) maximum and minimum load;
- (c) fault level;
- (d) available capacity to connect generation; and

(e) the information required by the Board's Distribution System Code. O. Reg. 326/09, s. 4 (2).

(3) The distributor shall provide the information referred to in subsection (2),

(a) in respect of each of the distribution system's feeder lines that are directly connected to a transformer station that is itself directly connected to a transmission system; and

(b) in respect of each of the distribution system's feeder lines that are not directly connected to a transformer station that is itself directly connected to a transmission system for which an application has been received from a generator in respect of a renewable energy generation facility with a name-plate capacity of greater than 10 kilowatts. O. Reg. 326/09, s. 4 (3).

(4) A distributor shall provide information to the public, and update it at least on a quarterly basis, regarding a listing of current applications for the connection of renewable generation facilities by application date and including the proposed name-plate capacity associated with each renewable energy generation facility in respect of each application. O. Reg. 326/09, s. 4 (4).

(5) The distributor shall provide the information referred to in subsection (4) to the public in respect of each feeder line within the distributor's distribution system for which an application has been received from a generator in respect of a renewable energy generation facility with a name-plate capacity of greater than 10 kilowatts. O. Reg. 326/09, s. 4 (5).

(6) A distributor shall provide, as soon as is practicable and no later than five days after receipt of a complete application for connection, written notice to all distributors and transmitters whose distribution or transmission systems are impacted by an application to connect to a distributor's distribution system. O. Reg. 326/09, s. 4 (6).

Reporting, IESO

5. For the purposes of subsection 25.37 (3) of the Act, the information that the IESO files with the Board shall include,

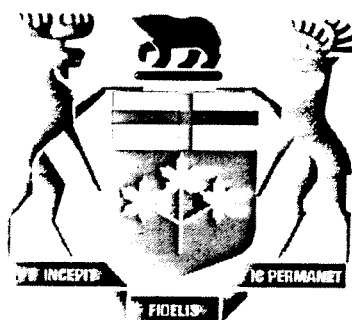
(a) the number of assessments completed within the quarter; and

(b) for each completed assessment, the time between the receipt by the IESO of a completed application for connection and the date that the assessment is issued.
O. Reg. 326/09, s. 5.

6. Omitted (provides for coming into force of provisions of this Regulation). O. Reg. 326/09, s. 6.

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TAB 2



Ontario

ONTARIO ENERGY BOARD

Distribution System Code

Last revised on July 28, 2010
(Originally Issued on July 14, 2000)

Distribution System Code

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3 CONNECTIONS AND EXPANSIONS

3.1 Connections

- 3.1.1 In establishing its connection policy as specified in its Conditions of Service, and determining how to comply with its obligations under section 28 of the *Electricity Act*, a distributor may consider the following reasons to refuse to connect, or continue to connect, a customer:
- (a) contravention of the laws of Canada or the Province of Ontario including the Ontario Electrical Safety Code;
 - (b) violation of conditions in a distributor's licence;
 - (c) materially adverse effect on the reliability or safety of the distribution system;
 - (d) imposition of an unsafe worker situation beyond normal risks inherent in the operation of the distribution system;
 - (e) a material decrease in the efficiency of the distributor's distribution system;
 - (f) a materially adverse effect on the quality of distribution services received by an existing connection; and
 - (g) if the person requesting the connection owes the distributor money for distribution services, or for non-payment of a security deposit. The distributor shall give the person a reasonable opportunity to provide the security deposit consistent with section 2.4.20.
- 3.1.2 A distributor shall ensure that all electrical connections to its system meet the distributor's design requirements, unless the electrical connections are separated by a protection device that has been approved by the distributor. If an electrical connection does not meet the distributor's design requirements, a distributor may refuse connection.
- 3.1.3 If a distributor refuses to connect a customer, the distributor shall inform the person requesting the connection of the reason(s) for not connecting and, where the distributor is able to provide a remedy, make an offer to connect. If the distributor is unable to provide a remedy to resolve the issue, it is the responsibility of the customer to do so before a connection may be made.

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- 3.1.4 For residential customers, a distributor shall define a basic connection and recover the cost of the basic connection as part of its revenue requirement. The basic connection for each customer shall include, at a minimum:
- (a) supply and installation of overhead distribution transformation capacity or an equivalent credit for transformation equipment; and
 - (b) up to 30 meters of overhead conductor or an equivalent credit for underground services.
- 3.1.5 For non-residential customers, a distributor may define a basic connection by rate class and recover the cost of connection either as part of its revenue requirement, or through a basic connection charge to the customer.
- 3.1.6 All customer classes shall be subject to a variable connection charge to be calculated as the costs associated with the installation of connection assets above and beyond the basic connection. A distributor may recover this amount from a customer through a connection charge or equivalent payment.

3.2 Expansions

- 3.2.1 If a distributor must construct new facilities to its main distribution system or increase the capacity of existing distribution system facilities in order to be able to connect a specific customer or group of customers, the distributor shall perform an initial economic evaluation based on estimated costs and forecasted revenues, as described in Appendix B, of the expansion project to determine if the future revenue from the customer(s) will pay for the capital cost and on-going maintenance costs of the expansion project.
- 3.2.2 If the distributor's offer was an estimate, the distributor shall carry out a final economic evaluation once the facilities are energized. The final economic evaluation shall be based on forecasted revenues, actual costs incurred (including, but not limited to, the costs for the work that was not eligible for alternative bid, and any transfer price paid by the distributor to the customer) and the methodology described in Appendix B.
- 3.2.3 If the distributor's offer was a firm offer, and if the alternative bid option was chosen and the facilities are transferred to the distributor, the distributor shall carry out a final economic evaluation once the facilities are energized. The final economic evaluation shall be based on the amounts used in the firm offer for

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costs and forecasted revenues, any transfer price paid by the distributor to the customer, and the methodology described in Appendix B.

3.2.4 The capital contribution that a distributor may charge a customer other than a generator or distributor to construct an expansion shall not exceed that customer's share of the difference between the present value of the projected capital costs and on-going maintenance costs for the facilities and the present value of the projected revenue for distribution services provided by those facilities. The methodology and inputs that a distributor shall use to calculate this amount are described in Appendix B.

3.2.5 The capital contribution that a distributor may charge a generator to construct an 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 facilities. 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 described in Appendix B.

3.2.5A Notwithstanding section 3.2.5 but subject to section 3.2.5B, a distributor shall not charge a generator to construct an expansion to connect a renewable energy generation facility:

- (a) if the expansion is in a Board-approved plan filed with the Board by the distributor pursuant to the deemed condition of the distributor's licence referred to in paragraph 2 of subsection 70(2.1) of the Act, or is otherwise approved or mandated by the Board; or
- (b) in any other case, for any costs of the expansion that are at or below the renewable energy generation facility's renewable energy expansion cost cap.

For greater clarity, the distributor shall bear all costs of constructing an expansion referred to in (a) and, in the case of (b), shall bear all costs of constructing the expansion that are at or below the renewable energy generation facility's renewable energy expansion cost cap.

3.2.5B Where an expansion is undertaken in response to a request for the connection of more than one renewable energy generation facility, a distributor shall not charge any of the requesting generators to construct the expansion:

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- (a) if the expansion is in a Board-approved plan filed with the Board by the distributor pursuant to the deemed condition of the distributor's licence referred to in paragraph 2 of subsection 70(2.1) of the Act, or is otherwise approved or mandated by the Board; or
- (b) in any other case, for any costs of the expansion that are at or below the amount that results from adding the total name-plate rated capacity of each renewable energy generation facility referred to in section 6.2.9(a) (in MW) and then multiplying that number by \$90,000.

For greater clarity, the distributor shall bear all costs of constructing an expansion referred to in (a) and, in the case of (b), shall bear all costs of constructing the expansion that are at or below the number that results from the calculation referred to in (b).

- 3.2.5C Where, in accordance with the calculation referred to in section 3.2.5B(b), a capital contribution is payable by the requesting generators, the distributor shall apportion the amount of the capital contribution among the requesting generators on a pro-rata basis based on the total name-plate rated capacity of the renewable energy generation facility referred to in section 6.2.9(a) (in MW).
- 3.2.6 If a shortfall between the present value of the projected costs and revenues is calculated under section 3.2.1, the distributor may propose to collect all or a portion of that amount from the customer in the form of a capital contribution, in accordance with the distributor's documented policy on capital contributions by customer class.
- 3.2.7 If the capital contribution amount resulting from the final economic evaluation provided for in section 3.2.2 or 3.2.3 differs from the capital contribution amount resulting from the initial economic evaluation calculation, the distributor shall obtain from the customer, or credit the customer for, any difference between the two calculations.
- 3.2.8 If an expansion is needed in order for a distributor to connect a customer, the distributor shall make an initial offer to connect the customer and build the expansion. A distributor's initial offer shall include, at no cost to the customer:
- (a) a statement as to whether the offer is a firm offer or is an estimate of the costs that would be revised in the future to reflect actual costs incurred;
 - (b) a reference to the distributor's Conditions of Service and information on how the customer requesting the connection may obtain a copy of them;

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- (c) a statement as to whether a capital contribution will be required from the customer;
- (d) a statement as to whether an expansion deposit will be required from the customer and if the distributor will require an expansion deposit from the customer, the amount of the expansion deposit that the customer will have to provide; and
- (e) a statement as to whether the connection charges referred to in sections 3.1.5 and 3.1.6 will be charged separately from the capital contribution referred to in section 3.2.8(c), and a description of, and if known, the amount for, those connection charges.

3.2.9 If the distributor will require a customer to pay a capital contribution, the distributor must, in addition to complying with section 3.2.8, also include in its initial offer, at no cost to the customer:

- (a) the amount of the capital contribution that the customer will have to pay for the expansion;
- (b) the calculation used to determine the amount of the capital contribution to be paid by the customer including all of the assumptions and inputs used to produce the economic evaluation as described in Appendix B;
- (c) a statement as to whether the offer includes work for which the customer may obtain an alternative bid and, if so, the process by which the customer may obtain the alternative bid;
- (d) a description of, and costs for, the work that is eligible for alternative bid and the work that is not eligible for alternative bid associated with the expansion broken down into the following categories:
 - (i) labour (including design, engineering and construction);
 - (ii) materials;
 - (iii) equipment; and
 - (iv) overhead (including administration);
- (e) an amount for any additional costs that will occur as a result of the alternative bid option being chosen (including, but not limited to, inspection costs);
- (f) if the offer is for a residential customer, a description of, and the amount for, the cost of the basic connection referred to in section 3.1.4 that has been factored into the economic evaluation; and

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- (g) if the offer is for a non-residential customer and if the distributor has chosen to recover the non-residential basic connection charge as part of its revenue requirement, a description of, and the amount for, the connection charges referred to in section 3.1.5 that have been factored into the economic evaluation.
- 3.2.10 Once the customer has accepted the distributor's offer, and if the customer requests it, the distributor shall provide to the customer, at cost, an itemized list of the costs for the major items in each of the categories listed in section 3.2.9(d) and shall be done in the following manner:
 - (a) if the customer has not chosen to pursue an alternative bid, the distributor shall provide the itemized list for all of the work; or
 - (b) if the customer has chosen to pursue the alternative bid option, the distributor shall only be required to provide the itemized list for the work that is not eligible for alternative bid.
- 3.2.11 If the customer submits revised plans or requires additional design work, the distributor may provide, at cost, a new offer based on the revised plans or the additional design work.
- 3.2.12 The distributor shall provide the customer with the calculation used to determine the final capital contribution amount including all of the assumptions and inputs used to produce the final economic evaluation as provided for in sections 3.2.2 and 3.2.3. The distributor shall provide the final economic evaluation and final capital contribution amount to the customer at no cost to the customer.
- 3.2.13 The last sentence of section 3.2.12 does 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.
- 3.2.14 Where the distributor requires a capital contribution from the customer, the distributor shall allow the customer to obtain and use alternative bids for the work that is eligible for alternative bid provided that the customer agrees to transfer the expansion facilities that are constructed under the alternative bid option to the distributor upon completion. The distributor shall require the customer to use a qualified contractor for the work that is eligible for alternative bid.

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3.2.15 The following activities are not eligible for alternative bid:

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

3.2.15A Work that requires physical contact with the distributor's existing distribution system is not eligible for alternative bid unless the distributor decides in any given case to allow such work to be eligible for alternative bid.

3.2.15B Despite any other provision of this Code, decisions related to the temporary de-energization of any portion of the distributor's existing distribution system are the sole responsibility of the distributor. Where the temporary de-energization is required in relation to work that is being done under alternative bid, the distributor shall apply the same protocols and procedures to the de-energization as it would if the customer had not selected the alternative bid option.

3.2.16 If a customer chooses to pursue an alternative bid and uses the services of a qualified contractor for the work that is eligible for alternative bid, the distributor shall:

- (a) require the customer to complete all of the work that is eligible for alternative bid;
- (b) require the customer to:
 - (i) select and hire the contractor;
 - (ii) pay the contractor's costs for the work that is eligible for alternative bid; and
 - (iii) assume full responsibility for the construction of that aspect of the expansion;
- (c) require the customer to be responsible for administering the contract (including the acquisition of all required permissions, permits and easements) or have the customer pay the distributor to do this activity;

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- (d) require the customer to ensure that the work that is eligible for alternative bid is done in accordance with the distributor's distribution system planning and the distributor's specifications for any of the following:
 - (i) the design of the expansion;
 - (ii) the engineering of the expansion, and
 - (iii) the layout of the expansion
 - (d.1) require the customer to obtain the distributor's review and approval of plans for the design, engineering, layout, and work execution for the work that is eligible for alternative bid to ensure conformance with the distribution system planning and specifications referred to in paragraph (d) prior to commencing that work; and
 - (e) inspect and approve, at cost, all aspects of the constructed facilities as part of a system commissioning activity, prior to connecting the constructed facilities to the existing distribution system.
- 3.2.17 In addition to the capital contribution amounts in sections 3.2.4 and 3.2.5, the distributor may also charge a customer that chooses to pursue an alternative bid any costs incurred by the distributor associated with the expansion including, but not limited to, the following:
- (a) costs for additional design, engineering, or installation of facilities required to complete the project;
 - (a.1) costs associated with any temporary de-energization of any portion of the existing distribution system that is required in relation to an expansion that is constructed under the alternative bid option;
 - (a.2) costs associated with the review and approval referred to in section 3.2.16(d.1);
 - (b) costs for administering the contract between the customer and the contractor hired by the customer if the distributor is asked to do so by the customer and the distributor agrees to do it; and
 - (c) costs for inspection or approval of the work performed by the contractor hired by the customer.

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When the customer transfers the expansion facilities to the distributor in accordance with section 3.2.18 and 3.2.19, the charges referred to above shall be included as part of the customer's costs for the purposes of determining the transfer price.

- 3.2.18 When the customer transfers the expansion facilities that were constructed under the alternative bid option to the distributor, and provided that the distributor has inspected and approved the constructed facilities, the distributor shall pay the customer a transfer price. The transfer price shall be the lower of the cost to the customer to construct the expansion facilities or the amount set out in the distributor's initial offer to do the work that is eligible for alternative bid. If the customer does not provide the distributor with the customer's cost information in a timely manner, then the distributor may use the amount for the work that is eligible for alternative bid as set out in its initial offer for the transfer price instead of the customer's cost.
- 3.2.19 Where a distributor is required to pay a transfer price under section 3.2.18, the transfer price shall be considered a cost to the distributor for the purposes of completing the final economic evaluation.
- 3.2.20 For expansions that require a capital contribution, a distributor may require the customer to provide an expansion deposit for up to 100% of the present value of the forecasted revenues as described in Appendix B. For expansions that do not require a capital contribution, a distributor may require the customer to provide an expansion deposit for up to 100% of the present value of the projected capital costs and on-going maintenance costs of the expansion project.
- 3.2.21 If an expansion deposit is collected under section 3.2.20, the expansion deposit shall cover both the forecast risk (the risk associated with whether the projected revenue for the expansion will materialize as forecasted) and the asset risk (the risk associated with ensuring that the expansion is constructed, that it is completed to the proper design and technical standards and specifications, and that the facilities operate properly when energized) related to the expansion.
- 3.2.22 If the alternative bid option was chosen, a distributor shall be allowed to retain and use the expansion deposit to cover the distributor's costs if the distributor must complete, repair, or bring up to standard the facilities. Complete, repair, or

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bring up to standard includes costs the distributor incurs to ensure that the expansion is completed to the proper design and technical standards and specifications, and that the facilities operate properly when energized.

- 3.2.23 Once the facilities are energized and subject to sections 3.2.22 and 3.2.24, the distributor shall annually return the percentage of the expansion deposit in proportion to the actual connections (for residential developments) or actual demand (for commercial and industrial developments) that materialized in that year (i.e., if twenty percent of the forecasted connections or demand materialized in that year, then the distributor shall return to the customer twenty percent of the expansion deposit). This annual calculation shall only be done for the duration of the customer connection horizon as defined in Appendix B. If at the end of the customer connection horizon the forecasted connections (for residential developments) or forecasted demand (for commercial and industrial developments) have not materialized, the distributor shall be allowed to retain the remaining portion of the expansion deposit.
- 3.2.24 If the alternative bid option was chosen, the distributor may retain up to ten percent of the expansion deposit for a warranty period of up to two years. This portion of the expansion deposit can be applied to any work required to repair the expansion facilities within the two year warranty period. The two year warranty period begins:
- (a) when the last forecasted connection in the expansion project materializes (for residential developments) or the last forecasted demand materializes (for commercial and industrial developments); or
 - (b) at the end of the customer connection horizon as defined in Appendix B,
- whichever is first. The distributor shall return any remaining portion of this part of the expansion deposit at the end of the two year warranty period.
- 3.2.25 Any expansion deposit required under section 3.2.20 shall be in the form of cash, letter of credit from a bank as defined in the *Bank Act*, or surety bond. The distributor shall allow the customer to select the form of the expansion deposit.
- 3.2.26 Where any expansion deposit is in the form of cash, the distributor shall return the expansion deposit to the customer together with interest in accordance with the following conditions:

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- (a) interest shall accrue monthly on the expansion deposit commencing on receipt of the total deposit required by the distributor; and
- (b) the interest rate shall be at the Prime Business Rate set by the Bank of Canada less 2 percent.

3.2.27 Unforecasted customers that connect to the distribution system during the customer connection horizon as defined in Appendix B will benefit from the earlier expansion and should contribute their share. In such an event, the initial contributors shall be entitled to a rebate from the distributor. A distributor shall collect from the unforecasted customers an amount equal to the rebate the distributor shall pay to the initial contributors. The amount of the rebate shall be determined as follows:

- (a) for a period of up to the customer connection horizon as defined in Appendix B, the initial contributor shall be entitled to a rebate without interest, based on apportioned benefit for the remaining period; and
- (b) the apportioned benefit shall be determined by considering such factors as the relative name-plate rated capacity of the parties, the relative load level of the parties and the relative line length in proportion to the line length being shared by both parties, as applicable.

3.2.27A Notwithstanding section 3.2.27, when the unforecasted customer is a renewable energy generation facility to which section 3.2.5A or 3.2.5B applies and the customer entitled to a rebate under section 3.2.27 is a load customer or a generation customer to which neither section 3.2.5A nor 3.2.5B applies, the initial contributors shall be entitled to a rebate from the distributor in an amount determined in accordance with section 3.2.27. The distributor shall reduce the connecting renewable energy generation facility's renewable energy expansion cost cap by an amount equal to the rebate. If the amount of the rebate exceeds the connecting renewable generation facility's renewable energy expansion cost cap, the distributor shall also collect the difference from the connecting renewable energy generation customer.

3.2.27B Notwithstanding section 3.2.27, when an unforecasted customer that is a renewable energy generation facility to which section 3.2.5A or 3.2.5B applies (the "unforecasted renewable generator") connects to the distribution system during the customer connection horizon as defined in Appendix B and benefits from an earlier expansion made on or after October 21, 2009 to connect another renewable energy generation facility to which section 3.2.5A or 3.2.5B applies (the "initial renewable generator"), the initial renewable generator shall

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be entitled to a rebate if the cost of the earlier expansion exceeded the initial renewable generator's renewable energy expansion cost cap. In such a case, the following rules shall apply:

- (a) the distributor shall pay to the initial renewable generator a rebate in an amount determined in accordance with section 3.2.27C; and
- (b) the distributor shall collect from the unforecasted renewable generator an amount determined in accordance with section 3.2.27C.

For greater certainty, no rebate shall be payable to an initial renewable generator towards the cost of an earlier expansion if the cost of the earlier expansion did not exceed the initial renewable generator's energy expansion cost cap.

3.2.27C For the purposes of section 3.2.27B:

- (a) the amount of the rebate payable by the distributor to the initial renewable generator shall be the difference between the amount paid by the initial renewable generator towards the cost of the earlier expansion and the amount that would have been paid by the initial renewable generator towards that cost, determined in accordance with the rules set out in sections 3.2.5B and 3.2.5C, had the earlier expansion been undertaken for both the initial renewable generator and the unforecasted renewable generator. The rebate shall be without interest; and
- (b) the amount to be collected from the unforecasted renewable generator shall be the amount that would have been paid by the unforecasted renewable generator towards the cost of the earlier expansion, determined in accordance with the rules set out in sections 3.2.5B and 3.2.5C, had the earlier expansion been undertaken for both the initial renewable generator and the unforecasted renewable generator.

3.2.27D Notwithstanding section 3.2.27, an unforecasted customer that is a load customer or a generation customer to which neither section 3.2.5A or 3.2.5B applies, that connects to the distribution system during the customer connection horizon as defined in Appendix B and that benefits from an earlier expansion made on or after October 21, 2009 to connect a renewable generation facility to which section 3.2.5A or 3.2.5B applies (the "initial renewable generator") shall contribute towards the cost of the earlier expansion. In such a case, the following rules shall apply:

- (a) where the cost of the earlier expansion exceeded the initial renewable generator's renewable energy expansion cost cap, the initial renewable generator and the distributor shall be entitled to a rebate in an amount determined in accordance with sections 3.2.27 and 3.2.27E; or

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- (b) where the cost of the earlier expansion was at or below the initial renewable generator's renewable energy expansion cost cap, the distributor shall be entitled to a rebate in an amount determined in accordance with section 3.2.27.

3.2.27E For the purposes of section 3.2.27D(a), the amount of the rebate shall be apportioned between the initial renewable generator and the distributor on a pro-rata basis based on their respective contributions to the cost of the earlier expansion.

3.2.27F For greater certainty:

- (a) sections 3.2.27B and 3.2.27D do not apply in respect of an expansion referred to in section 3.2.5A(a) or 3.2.5B(a);
- (b) the amount of the rebate payable to an initial renewable generator under section 3.2.27B or section 3.2.27D(a) shall not exceed the amount paid by the initial renewable generator as a capital contribution towards the cost of the earlier expansion; and
- (c) where an earlier expansion referred to in section 3.2.27B or 3.2.27D was made to connect more than one renewable energy generation facility to which section 3.2.5B applies, the amount of the rebate payable to the renewable generators shall be apportioned between them on a pro-rata basis based on the total name-plate rated capacity of each renewable energy generation facility referred to in section 6.2.9(a) (in MW).

3.2.28 A distributor shall prepare all estimates and offers required by section 3.2 in accordance with good utility practice and industry standards.

3.2.29 The distributor shall perform all of its responsibilities and obligations under section 3.2 in a timely manner.

3.2.30 An expansion of the main distribution system includes:

- (a) building a new line to serve the connecting customer;
- (b) rebuilding a single-phase line to three-phase to serve the connecting customer;
- (c) rebuilding an existing line with a larger size conductor to serve the connecting customer;

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- (d) rebuilding or overbuilding an existing line to provide an additional circuit to serve the connecting customer;
- (e) converting a lower voltage line to operate at higher voltage;
- (f) replacing a transformer to a larger MVA size;
- (g) upgrading a voltage regulating transformer or station to a larger MVA size; and
- (h) adding or upgrading capacitor banks to accommodate the connection of the connecting customer.

3.3 Enhancements

- 3.3.1 A distributor shall continue to plan and build the distribution system for reasonable forecast load growth. A distributor may perform enhancements to its distribution system for purposes of improving system operating characteristics or for relieving system capacity constraints. In determining system enhancements to be performed on its distribution system, a distributor shall consider the following:
 - (a) good utility practice;
 - (b) improvement of the system to either meet or maintain required performance-based indices;
 - (c) current levels of customer service and reliability and potential improvement from the enhancement; and
 - (d) costs to customers associated with distribution reliability and potential improvement from the enhancement.
- 3.3.2 Renewable enabling improvements to the main distribution system to accommodate the connection of renewable energy generation facilities are limited to the following:
 - (a) modifications to, or the addition of, electrical protection equipment;
 - (b) modifications to, or the addition of, voltage regulating transformer controls or station controls;
 - (c) the provision of protection against islanding (transfer trip or equivalent);

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- (d) bidirectional reclosers;
- (e) tap-changer controls or relays;
- (f) replacing breaker protection relays;
- (g) Supervisory Control and Data Acquisition system design, construction and connection;
- (h) any other modifications or additions to allow for and accommodate 2-way electrical flows or reverse flows; and
- (i) communication systems to facilitate the connection of renewable energy generation facilities.

3.3.3 Subject to section 3.3.4, the distributor shall bear the cost of constructing an enhancement or making a renewable enabling improvement, and therefore shall not charge:

- (a) a customer a capital contribution to construct an enhancement; or
- (b) a customer that is connecting a renewable energy generation facility a capital contribution to make a renewable enabling improvement.

3.3.4 Section 3.3.3(a) shall not apply to a distributor until the distributor's rates are set based on a cost of service application for the first time following the 2010 rate year.

3.4 Relocation of Plant

3.4.1 When requested to relocate distribution plant, a distributor shall exercise its rights and discharge its obligations in accordance with existing legislation such as the *Public Service Works on Highways Act*, regulations, formal agreements, easements and common law. In the absence of existing arrangements, a distributor is not obligated to relocate the plant. However, the distributor shall resolve the issue in a fair and reasonable manner. Resolution in a fair and reasonable manner shall include a response to the requesting party that explains the feasibility or infeasibility of the relocation and a fair and reasonable charge for relocation based on cost recovery principles.

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4 OPERATIONS

4.1 Quality of Supply

- 4.1.1 A distributor shall follow good utility practice in managing the power quality of the distributor's distribution system and define in its Conditions of Service the quality of service standards to which the distribution system is designed and operated.
- 4.1.2 A distributor shall maintain a voltage variance standard in accordance with the standards of the Canadian Standards Association CAN3-235. A distributor shall practice reasonable diligence in maintaining voltage levels, but is not responsible for variations in voltage from external forces, such as operating contingencies, exceptionally high loads and low voltage supply from the transmitter or host distributor.
- 4.1.3 Subject to section 4.7, a distributor shall respond to and take reasonable steps to investigate all consumer power quality complaints and report to the consumer on the results of the investigation.
- 4.1.4 Except in relation to an investigation conducted under section 4.7, if the source of a power quality problem is caused by the consumer making the complaint, the distributor may seek reimbursement for the time and cost spent to investigate the complaint.
- 4.1.5 A distributor shall take appropriate actions to control harmonic distortions found to be detrimental to consumers connected to the distribution system. If the distributor is unable to correct a problem without adversely impacting other distribution system consumers, a distributor may choose not to make the corrections. In deciding which actions to take, a distributor should use appropriate industry standards and good utility practice as guidelines.
- 4.1.6 A distributor shall require a consumer or customer that owns equipment connected to the distribution system to take reasonable steps to ensure that the operation or failure of that equipment does not cause a distribution system outage or disturbance.
- 4.1.7 A distributor may require that any consumer or customer condition that adversely affects the distribution system be corrected immediately by the consumer or customer at the consumer's or customer's cost.

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- 5.3.10 A distributor that provides metering services directly or through a Meter Service Provider shall exercise appropriate diligence in detecting and acting upon instances of tampering with metering and service entrance equipment. Upon identification of possible meter tampering, the distributor should notify, as appropriate, Measurement Canada, police officials, the Electrical Safety Authority, or other entities.
- 5.3.11 Nothing in this Code shall affect the obligation of a distributor to comply with all Measurement Canada requirements provided that, where this Code or other conditions of licence prescribe a higher standard than that prescribed in those requirements, the distributor shall comply with the higher standard.
- 5.3.12 A distributor shall respond to customer and retailer metering disputes, and shall establish a fair and reasonable charge for costs associated with resolution of these disputes. If the complaint is substantiated, the charge shall not be applied. In resolving the dispute, a distributor may use a qualified, independent organization at anytime during the dispute resolution process.
- 5.3.13 Notwithstanding any other provision of section 5.3, the VEE process for all data from a smart meter shall be completed by one or more of:
- a. the Smart Metering Entity;
 - b. the IESO, in its capacity, given by regulation, to plan, manage and implement the smart metering initiative or any aspect of that initiative; or
 - c. the distributor,
- as may be provided by, and in accordance with, the VEE process established by the Smart Metering Entity or the IESO.

5.4 Agreement with SME or IESO Relating to Metering

- 5.4.1 A distributor shall, upon being requested to do so, enter into an agreement with the Smart Metering Entity or the IESO, in a form approved by the Board, which sets out the respective roles and responsibilities of the distributor and the Smart Metering Entity or the IESO in relation to metering and the information required to

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be exchanged to allow for the conduct of these respective roles and responsibilities.

6 DISTRIBUTORS' RESPONSIBILITIES

6.1 Responsibilities to Load Customers

This section applies to load customers other than customers with existing or proposed embedded generation facilities that are not emergency backup generation facilities, and embedded distributors.

- 6.1.1 A distributor shall make every reasonable effort to respond promptly to a customer's request for connection. In any event a distributor shall respond to a customer's written request for a customer connection within 15 calendar days. A distributor shall make an offer to connect within 60 calendar days of receipt of the written request, unless other necessary information is required from the load customer before the offer can be made.
- 6.1.2 A distributor has an implied contract with any customer that is connected to the distributor's distribution system and receives distribution services from the distributor. The terms of the implied contract are embedded in the distributor's Conditions of Service, the Rate Handbook, the distributor's rate schedules, the Distributor's licence and the Distribution System Code.
- 6.1.3 A distributor may require a customer to enter into a Connection Agreement with the distributor if the distributor believes that the customer has characteristics that require an explicit document to describe the relationship between the distributor and the customer. Suggested information to be included in the Connection Agreement with customers is listed in Appendix D.
- 6.1.4 A distributor shall enter into a Connection Agreement with a customer that is connected to the distributor's distribution system and is a wholesale market participant.
- 6.1.5 Before entering a property to carry out an activity described in section 40 of the *Electricity Act*, the person shall, in accordance with subsection 40(8) of the *Electricity Act*:
 - provide reasonable notice of the entry to the occupier of the property;

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- in so far as is practicable, restore the property to its original condition; and
- provide compensation for any damages caused by the entry that cannot be repaired.

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 or an embedded generation facility that is used exclusively for load displacement purposes at all times.
- 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. Where a distributor does not have a Connection Agreement with an existing generator that has a generation facility connected to the distributor's distribution system, the distributor shall be deemed to have an implied contract with the generator. The terms of the implied contract are embedded in the distributor's Conditions of Service, the Rate Handbook, the distributor's rate schedules, the distributor's licence and the Distribution System Code.

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. information regarding any approvals from the ESA, the IESO, OEB, or a transmitter that are required 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 distributor's feeder and substation technical capacity limits as well as metering requirements;
 - d. the standard contractual terms and conditions for being connected to the distributor's distribution system; and
 - e. the name, telephone number and e-mail address of the distributor's representative for inquiries relating to the connection of embedded generation facilities.

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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.

6.2.4.1 Subject to section 6.2.4.2, a distributor shall establish and maintain a capacity allocation process under which the distributor will process applications for the connection of embedded generation facilities. The capacity allocation process shall meet the following requirements:

- 2-6-2-13
- a. each application for connection, including an application under section 6.2.25a, will be allocated capacity only upon completion of the distributor's connection impact assessment, any required host distributor's connection impact assessment, and any required review of TS supply capability for the embedded generation facility;
 - b. a connection impact assessment will not be completed for a proposed connection that can not be completed within the feeder and/or substation technical capacity limits of the distributor's distribution system, any host distributor's distribution system or the supply TS and transmission system, including capacity additions contained in any Board approved plans to increase the capacity of one or more of the distributor's distribution system, any host distributor's distribution system or the supply TS and transmission system;
 - c. a connection impact assessment will not be completed unless the embedded generation facility which is the subject of the application meets the following requirements at the time the application is made:
 - demonstrated site control over the land on which the embedded generation facility is proposed to be located and any required adjacent or buffer lands in the form of property ownership (deed), long term lease (lease agreement) or an executed option to purchase or lease the land.
 - a proposed in-service date for the embedded generation facility which is no later than 5 years for water power projects or 3 years for all other types of projects from the initial date of application for connection or in accordance with the timelines in an executed OPA contract.

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- d. the distributor shall notify the applicant when its capacity allocation is granted;
 - e. an applicant shall have its capacity allocation removed if
 - i. a connection cost agreement has not been signed in relation to the connection of the embedded generation facility within 6 months of the date on which the applicant received a capacity allocation for the proposed embedded generation facility;
 - ii. a new connection impact assessment is prepared for a proposed embedded generation facility under section 6.2.15 and the new assessment differs in a material respect from the original connection impact assessment prepared for that facility;
 - iii. any required deposits payable to the distributor pursuant to section 6.2.18A, 6.2.18B, or 6.2.18C have not been received by the date specified by the distributor;
 - iv. the distributor is informed by the OPA that the applicant has defaulted on an executed OPA contract; or
 - v. the applicant defaults on an executed connection cost agreement and fails to correct the default within 30 calendar days.
 - f. If any applicant has its capacity allocation removed in accordance with paragraph (e), the amount of any capacity allocation deposit and or additional capacity allocation deposit paid pursuant to the connection cost agreement requirements in section 6.2.18 shall be forfeited by the applicant and retained by the distributor in a deferral account for disposition by the Board. The amount of any unspent connection cost deposit shall be returned to the applicant in accordance with the requirements of section 6.2.18 G.
 - g. the distributor shall provide the applicant with two months' advance notice of the expiry of the 6-month period referred to in paragraph e prior to removing the capacity allocated to the applicant.
- 6.2.4.2 Section 6.2.4.1 does not apply to an application to connect a micro-embedded generation facility, a capacity allocation exempt small embedded generation facility, or an embedded generation facility that is not an embedded retail generation facility. Applications to connect to which the capacity allocation process does not apply, including by virtue of section 6.2.1, shall be processed by a distributor in accordance with this Code as and when received.

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- 6.2.4.3 Any application to connect a capacity allocation exempt small embedded generation facility that was received by a distributor prior to the date of coming into force of this section shall be processed by the distributor in accordance with the provisions of this Code applicable to such generation facilities as though the application to connect had been received by the distributor on the date of coming into force of this section.

Connection of Micro-Generation Facilities

- 6.2.5 A distributor shall require a person that applies for the connection of a micro-embedded 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 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. Where the proposed micro-embedded generation facility will be located other than at an existing customer connection, the distributor shall, within 60 days of receiving the application, make an offer to connect or provide reasons for refusing to connect the proposed generation facility. In either case, 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 connect the applicant's micro-embedded 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

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Agreement in the form set out in Appendix E and paying the distributor for the connection costs, including costs for any necessary new or modified metering.

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 generation facility.
- 6.2.8A Notwithstanding any other provision of this Code, a distributor shall, for the purposes of determining the connection feasibility of a capacity allocation exempt small embedded generation facility and of determining the impact of such facility on the distributor's distribution system and on any customers of the distributor, treat any capacity associated with a generation facility that has a capacity allocation referred to in section 6.2.4.1 as available capacity.
- 6.2.8B Where a distributor believes that, by virtue of the operation of section 6.2.8A, the connection of a capacity allocation exempt small embedded generation facility cannot reasonably be managed by the distributor without adversely affecting the capacity allocation of a generation facility, the distributor shall promptly so notify the Board in writing. In such a case, and notwithstanding any other provision of this Code, the distributor shall not take any further steps to connect the capacity allocation exempt small embedded generation facility without further direction from the Board.
- 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 providing the required information. 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 proposed locations of the proposed generation facility including addresses and account numbers with the distributor where available.

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6.2.9.1 Upon request, a distributor shall provide the following to a person that has requested a meeting under section 6.2.9: •

- a. a description of the portion of the distributor's distribution system relevant to the person's embedded generation facility, including the corresponding portions of an up-to-date system schematic map showing, at a minimum, the following:
 - major distribution and sub-transmission lines;
 - transformer and distribution stations;
 - the voltage levels used for distribution;
 - sufficient geographic references to enable the person to correlate all of the above features with a municipal road map; and
 - such other information as the Board may from time to time determine;
- b. subject to section 6.2.9.4, information on voltage level, fault level and minimum/maximum feeder loadings for up to three locations in the distributor's service area; and
- c. for each of the proposed locations included in the request, information about the amount of additional generation, above and beyond what is already connected and what capacity has already been allocated, that can be accommodated i) within the distributor's feeder and/or substation technical capacity limits; ii) within any host distributor's feeder and/or substation capacity limits; iii) within the transmitter's TS technical capacity limits; and iv) without exceeding the IESO's requirement for a SIA.

6.2.9.2 The distributor shall provide the information referred to in section 6.2.9.1 without charge and within the 15 days referred to in section 6.2.9.

6.2.9.3 Upon request, a distributor shall, subject to section 6.2.9.4, provide the information referred to in section 6.2.9.1(b) to a person that has requested a meeting under section 6.2.9 for one or more additional locations beyond the three required by section 6.2.9.1(b). The distributor shall use reasonable efforts to provide such information within the 15 days referred to in section 6.2.9, but shall in any event provide that information within a further 15 days. The distributor may recover from the person the reasonable costs incurred by the distributor in preparing the information for the additional locations.

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- 6.2.9.4 A distributor may withhold information on minimum/maximum feeder loadings where the distributor believes on reasonable grounds that the disclosure of such information could be used to identify the load characteristics of an existing customer and that the loading information is therefore commercially sensitive. A distributor shall, before deciding to withhold such information, make reasonable efforts to obtain the consent of the existing customer to the disclosure of the loading information.
- 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 costs and provide the following information:
- evidence that the requirements set out in section 6.2.4.1(c) have been met;
 - the proposed point of common coupling with the distribution system;
 - the information set out in section 6.2.9 if this has not already been provided to the distributor;
 - a single line diagram of the proposed connection;
 - a preliminary design of the proposed interface protection; and
 - all necessary technical information required by the distributor to complete the connection impact assessment.
- 6.2.12 Subject to sections 6.2.4.1(b), 6.2.4.1(c) and 6.2.4.2, 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:
- 60 days of the receipt of the application where no distribution system reinforcement or expansion is required; and
 - 90 days of the receipt of the application where a distribution system reinforcement or expansion is required.
- An offer to connect made to an applicant proposing to connect a capacity allocation exempt small embedded generation facility may be revoked by the distributor if not accepted by the applicant within 60 days.
- 6.2.13 Subject to sections 6.2.4.1(b) and 6.2.4.1(c), the distributor shall provide its assessment of the impact of the proposed embedded generation facility within:

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- 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 embedded generation facility.

6.2.14 ~~The distributor's impact assessment shall set out the impact of the proposed embedded 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.

6.2.14A ~~The distributor shall, within 10 days of initiating a connection impact assessment study, advise in writing any transmitter or distributor whose transmission or distribution system is directly connected to the specific feeder or substation to which the proposed embedded generation facility is proposing to connect. The distributor shall include in the written communication, at a minimum, the proposed in-service date, the rated capacity and type of technology of the proposed embedded generation facility. If the distributor requires a transmitter or host distributor to complete a TS review study or connection impact assessment, the distributor shall file an application with the transmitter or host distributor for such. A distributor will also inform the transmitter or distributor in writing on an ongoing basis of any change in status of the project including removing the capacity allocation for the project, material changes in the projected in-service date of the project or placing the project in service.~~

6.2.15 Any material revisions to the design, planned equipment or plans for the proposed embedded 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 6.2.12 or 6.2.13. If the new impact assessment differs in a material respect from the original connection impact assessment for the project, the project shall have its capacity allocation removed in accordance with the requirements of section 6.2.4.1 (e) ii.

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- 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 distributor that has been advised under section 6.2.17.
- 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 6.2.12 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 A distributor shall enter into a connection cost agreement with an applicant in relation to a small embedded generation facility, a mid-sized embedded generation facility or a large embedded generation facility. The connection cost agreement shall include the following:
- a. a requirement that the applicant pay a connection cost deposit equal to 100% of the total estimated allocated cost of connection at the time the connection cost agreement is executed;
 - b. if the applicant does not have an executed OPA contract which includes a requirement for security deposits or similar payments, a requirement that the applicant pay a capacity allocation deposit equal to \$20,000 per MW of capacity of the embedded generation facility at the time the connection cost agreement is executed;
 - c. if the applicant does not have an executed OPA contract which includes a requirement for additional security deposits or similar

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payments, a requirement that if fifteen (15) calendar months following the execution of the connection cost agreement the embedded generation facility is not connected to the distributor's distribution system, the applicant must pay an additional capacity allocation deposit equal to \$20,000 per MW of capacity of the embedded generation facility on the first day of the sixteenth (16th) calendar month following the execution of the connection cost agreement;

- d. if the applicant has an executed OPA contract which includes a requirement for security deposits or similar payments, the distributor shall not require the applicant to pay a capacity allocation deposit or an additional capacity allocation deposit;
- e. a requirement that the mutually agreed upon in-service date is no later than 5 years for water power projects or 3 years for all other types of projects from the initial date of application for connection or in accordance with the timelines in an executed OPA contract;
- f. a requirement that the applicant complete its engineering design and provide detailed electrical drawings to the distributor at least 6 months prior to the specified in-service date or as reasonably required by the distributor;
- g. any requirements relating to the applicant's acceptance of the distributor's offer to connect and the connection costs; and
- h. the timing of the connection.

The distributor's offer to connect shall be attached as an appendix to and form part of the cost connection agreement. 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.

- 6.2.18A For any proponent that executed a connection cost agreement prior to the date of coming into force of this section, but is not yet connected to the distributor's distribution system, the distributor shall notify the proponent of that embedded generation facility, within 60 days of this section coming into force, that a connection cost deposit equal to 100% of the total allocated cost of connection and a capacity allocation deposit equal to \$20,000 per MW of capacity of the embedded generation facility must be paid within 60

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days of the distributor's notice as a condition of the applicant maintaining its current capacity allocation.

6.2.18B For any proponent that executed a connection cost agreement prior to the date of coming into force of this section, but is not yet connected to the distributor's distribution system and for which fifteen (15) calendar months or more have elapsed since the date on which the proponent executed a connection cost agreement, the distributor shall notify the proponent of that embedded generation facility, within 60 days of this section coming into force, that an additional capacity allocation deposit equal to \$20,000 per MW of capacity for the embedded generation facility must be paid within 60 days of the distributor's notice as a condition of the applicant maintaining its current capacity allocation. For clarity, this additional capacity allocation deposit is in addition to any deposit that may be required under section 6.2.18A.

6.2.18C For any proponent that was allocated capacity but that had not yet executed a connection cost agreement on or before the date of coming into force of this section for one or both of the following reasons:

- a. the connection impact assessment was completed within the last 12 months,
- b. an IESO System Impact Assessment ("SIA") is required and has not yet been completed,

the distributor shall notify the applicant within 60 days of the later of i) the project having been allocated capacity for a period of 12 months or ii) the SIA study being completed and its impact on the generation facility being identified, that as a condition of the applicant maintaining its current capacity allocation the applicant must execute a connection cost agreement with the distributor within 60 days of the distributor's notice.

6.2.18D Any connection cost deposit, capacity allocation deposit or additional capacity allocation deposit required to be obtained by the distributor pursuant to this Code shall be in the form of cash, letter of credit from a bank as defined in the Bank Act, or surety bond. The distributor shall allow the applicant to select the form of any required connection cost deposit, capacity allocation deposit and/or additional capacity allocation deposit.

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6.2.18E The connection cost deposit shall be used by the distributor to pay for costs allocated to the applicant and related to the connection of the embedded generation facility to the distribution system in accordance with the terms of the relevant connection cost agreement.

6.2.18F If, following the connection of an embedded generation facility to the distributor's distribution system the distributor determines that the amount of the connection cost deposit provided by the applicant exceeded the costs allocated to the applicant and related to connecting the generation facility to the distributor's distribution system, the distributor shall at the time of connection refund to the applicant the amount by which the connection cost deposit exceeded the costs related to connecting the embedded generation facility.

6.2.18G The distributor shall, no later than 30 calendar days after the applicant has its capacity allocation removed in accordance with subsection 6.2.4.1(e), refund to the applicant the amount of any remaining connection cost deposit provided by the applicant to the distributor pursuant to a connection cost agreement, provided that if the distributor has incurred costs associated with the connection of the applicant's embedded generation facility to the distributor's distribution system in accordance with the relevant connection cost agreement, the distributor shall subtract the amount of any such incurred costs from the total connection cost deposit amount provided by the applicant prior to remitting any refund to the applicant.

6.2.18H The distributor shall refund to the applicant the amount of any capacity allocation deposit or additional capacity allocation deposit provided by the applicant to the distributor no later than 30 calendar days after the applicant connects to the distributor's distribution system.

6.2.18I Where any connection cost deposit, capacity allocation deposit or additional capacity allocation deposit is provided by an applicant to a distributor in the form of cash and where the distributor refunds all or any portion of such connection cost deposit, capacity allocation deposit or additional capacity allocation deposit to the applicant in accordance with this Code, the return of such deposit or deposits shall be in accordance with the following conditions:

- a. interest shall accrue monthly on the deposit amounts commencing on the receipt of the deposit required by the distributor; and

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- b. the interest rate shall be at the Prime Business Rate set by the Bank of Canada less 2 percent.
- 6.2.19 The distributor shall have the right to witness the commissioning and testing of the connection of the generation facility to the distributor's distribution system.
- 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 in commissioning and testing of the generation facility which are beyond the control of the distributor, a distributor shall connect a proposed small embedded generation facility within:
 - a. 60 days of the applicant taking the steps set out in section 6.2.20, where no distribution system reinforcement or expansion is required; and
 - b. 180 days of the applicant taking the steps set out in section 6.2.20, 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 generation facility.
- 6.2.25a A distributor shall require a generator that proposes to increase the output of an embedded generation facility that is then in service to submit a new application to connect, and the provisions of sections 6.2.9 to 6.2.24 shall apply.

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Technical Requirements

- 6.2.25 A distributor shall ensure that the safety, reliability and efficiency of the distribution system is not materially adversely affected 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 other than a micro-embedded 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.

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- 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.

6.2A Connection Process for Distributor-owned Generation Facilities

- 6.2A.1 Except as otherwise provided in sections 6.2A.2 to 6.2A.6, a distributor shall connect a generation facility that will be owned by it in accordance with section 6.2.
- 6.2A.2 The following sections do not apply in respect of the connection of a generation facility that will be owned by the distributor to whose distribution system the facility is being connected: 6.2.3; 6.2.4.1(d); 6.2.4.1(g); 6.2.5; 6.2.9; 6.2.9.1; 6.2.9.2
- 6.2A.3 In applying section 6.2 in relation to a generation facility that will be owned by the distributor to whose distribution system the generation facility will be connected, the following shall apply:
- (a) the distributor shall be deemed to be and shall in all respects be treated as the "applicant" or person applying for the connection of a generation facility (however that may be expressed in section 6.2);
 - (b) where a provision in section 6.2 requires an applicant or generator to pay a cost, charge, fee or other amount of money or requires a distributor to refund or return a cost, charge, fee or other amount of money to an applicant or a generator, the distributor shall instead record the relevant amount in accordance with the Accounting Guidelines. The payment requirement shall be deemed to have been satisfied on the date on which the requisite accounting record is made by the distributor;
 - (c) where a provision in section 6.2 requires an applicant or generator to provide a deposit or requires a distributor to refund or return all or part of a deposit to an applicant or a generator, the distributor shall instead record the relevant amount in accordance with the Accounting Guidelines. The requirement to provide, refund or return a deposit shall be deemed to have been satisfied on the date on which the requisite accounting record is made by the distributor;
 - (d) the distributor shall complete its standard connection application form applicable to the type and size of its generation facility, and shall append to that form any information that would be required to be provided by a third party applicant under section 6.2.5 or 6.2.9, as applicable, and section 6.2.11, if that information is not already covered by the standard

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application. This completed form shall be deemed to be and shall in all respects be treated as the application to connect (however that may be expressed in section 6.2); and

- (e) the date on which an application is filed with the Ontario Power Authority for a contract under the Feed-in Tariff program in relation to the output of the distributor's generation facility shall be deemed to be and shall in all respects be treated as the date of receipt by the distributor of the application to connect its generation facility, and the distributor shall date stamp the application form referred to in section paragraph (d) accordingly.

For the purposes of this section: (i) "deposit" means a capacity allocation deposit, an additional capacity allocation deposit and a connection cost deposit, as applicable; and (ii) "Accounting Guidelines" means all requirements established by the Board and in effect at the relevant time in respect of the accounting records, accounting principles and accounting separation standards to be followed by the distributor in relation to a generation facility owned by the distributor, including the "Guidelines: Regulatory and Accounting Treatments for Distributor-Owned Generation Facilities" (G-2009-0300).

6.2A.4 The following shall apply in relation to the connection of a generation facility that will be owned by the distributor to whose distribution system the generation facility will be connected:

- (a) where capacity can be allocated in respect of the generation facility in accordance with the applicable provisions of section 6.2, capacity shall be allocated in relation to the generation facility within 150 days from the deemed date of receipt of the application, determined in accordance with section 6.2A.3(e). The distributor shall document the date on which capacity has been allocated in relation to the generation facility;
- (b) in lieu of the requirement set out in section 6.2.4.1(e)(v), capacity allocated in respect of the generation facility shall be removed if the distributor or the generation facility fail to satisfy any of the requirements of a connection cost agreement referred to in section 6.2A.4(i);
- (c) in lieu of section 6.2.6, the following shall apply:
 - i. the distributor shall complete its standard offer to connect applicable to micro-embedded generation facilities in relation to its generation facility within the applicable timeline set out in section 6.2.6; and

TAB 3



NOTICE OF PROPOSAL TO AMEND A CODE
PROPOSED AMENDMENTS TO THE DISTRIBUTION SYSTEM CODE

BOARD FILE NO: EB-2009-0077

**To: All Licensed Electricity Distributors
All Licensed Generators
All Participants in Consultation Process EB-2007-0031
All Participants in Consultation Process EB-2008-0003
All Other Interested Parties**

The Ontario Energy Board (the "Board") is giving notice under section 70.2 of the *Ontario Energy Board Act, 1998* (the "Act") of proposed amendments to the Distribution System Code (the "DSC") (the "Proposed Amendments"). The Proposed Amendments would revise the Board's current approach to assigning cost responsibility as between a distributor and a generator in relation to the connection of renewable generation facilities to distribution systems, and are intended to facilitate implementation of the Government's policy objectives regarding renewable generation.

1. Background

A. Current Cost Responsibility Policy for Distributed Generation

Cost responsibility associated with investments in distribution infrastructure is governed principally by the DSC. The DSC contemplates two types of costs relating to generation connections: costs associated with the connection assets and costs associated with any "expansion" to the distribution system that may be triggered by a connecting generator. Under the current framework, a generator that connects to a distribution system is responsible for paying all of the costs of connecting its generation facility to the distribution network, including any costs associated with distribution and transmission system upgrades beyond the connection point that are required to accommodate the generation facility. These costs are payable up front, and these assets are not added to the rate base of the distributor.

The DSC also makes provision for a rebate of a portion of the distribution system expansion costs where a subsequent generator connects to the distribution system and obtains the benefit of reinforcements paid for by an earlier generator.

B. Green Energy and Green Economy Act, 2009

The *Green Energy and Green Economy Act, 2009*, which received Royal Assent on May 14, 2009, will, when proclaimed, make a number of amendments to the Act. Of those amendments, the following are relevant to the issue of cost responsibility associated with the connection of renewable generation facilities to a distribution system.

- i. The Board will have, as a new objective, to “promote the use and generation of electricity from renewable energy sources in a manner consistent with the policies of the Government of Ontario, including the timely expansion or reinforcement of transmission systems and distribution systems to accommodate the connection of renewable energy generation facilities” (paragraph 5 of subsection 1(1) of the Act).

A “renewable energy source” will be defined, by reference to the definition of that term in subsection 2(1) of the *Electricity Act, 1998*, as “an energy source that is renewed by natural resources and includes wind, water, biomass, biogas, biofuel, solar energy, geothermal energy, tidal forces and such other energy sources as may be prescribed by the regulations, but only if the energy source satisfies such criteria as may be prescribed by the regulations for that energy source” (section 3 of the Act). A “renewable energy generation facility” will be defined as follows, also by reference to the definition of the same term in subsection 2(1) of the *Electricity Act, 1998*: “a generation facility that generates electricity from a renewable energy source and that meets such criteria as may be prescribed by regulation and includes associated or ancillary equipment, systems and technologies as may be prescribed by regulation, but does not include an associated waste disposal site, unless the site is prescribed by regulation for the purposes of this definition” (section 3 of the Act).

- ii. New deemed conditions of licence will be introduced that require distributors and transmitters to: (a) file for Board approval, in the manner and at the times mandated by the Board, plans for the expansion or reinforcement of their respective systems to accommodate the connection of renewable energy generation facilities; and (b) expand or reinforce their respective systems to accommodate the connection of renewable energy generation facilities in accordance with their respective Board-approved plans or as otherwise mandated by the Board or prescribed by regulation. In furtherance of these new deemed licence conditions, the Board is undertaking a separate consultation process to address infrastructure investment planning (see section 2.B).

In addition to the above, the *Green Energy and Green Economy Act, 2009* will introduce a mechanism whereby Board-approved costs incurred by a distributor to make an “eligible investment” for the purpose of connecting or enabling the connection of a “qualifying generation facility” to its distribution system may be recovered through contributions payable by all consumers throughout the Province (section 79.1 of the

Act). Details of the investments to which this mechanism apply must await the issuance of the necessary regulation. The Board is of the view that cost recovery is an issue separate and apart from that of cost responsibility in the sense that the rules applicable to the former issue need not and should not dictate or drive the outcome on the latter issue. For that reason, the Board believes that it is appropriate to move forward with this initiative notwithstanding that the cost recovery framework under section 79.1 of the Act is not yet complete.

The Board also notes that the *Green Energy and Green Economy Act, 2009* will introduce a new regulation-making power that empowers the Lieutenant Governor in Council to make regulations prescribing circumstances under which a transmitter or distributor shall bear the costs of construction, expansion or reinforcement associated with the connection of a renewable energy generation facility to the transmitter's transmission system or the distributor's distribution system (subsection 88(1)(g.6.0.1) of the Act). To the extent that any such regulation is made, the Board may need to revisit the policies proposed in this Notice.

C. Distribution Connection Cost Responsibility Review

On January 29, 2008, in the context of the "Distributed Generation – Rates and Connection" consultation (EB-2007-0630), the Board indicated that it would initiate a "Distribution Connection Cost Responsibility Review" (the "DCCRR") to examine the issue of cost responsibility associated with the connection of generation facilities to electricity distribution systems once the "Transmission Connection Cost Responsibility Review" (EB-2008-0003) was substantially completed.¹ When the Board made this announcement, it also indicated that the DCCRR would include consideration of the merits of regulated "use of system" charges as a method of recovering costs that may be the responsibility of the distributed generator. Also identified for consideration was cost responsibility for transmission upgrades that are triggered by distributed generation connections and the associated implications for the Transformation Connection Pool and, in some circumstances, the Line Connection Pool.

The amendments to the Act set out in the *Green Energy and Green Economy Act, 2009* make it clear that the connection of renewable energy generation facilities is a policy matter of priority for the Government. In order to facilitate the implementation of that policy as expeditiously as possible, the Board believes that it is desirable to move forward with its review of the assignment of cost responsibility associated with the connection of renewable generation facilities to distribution systems. The Board may, at a future date, consider some of the other issues (such as "use of system" charges) that were initially intended to be included as part of the DCCRR.

¹ On April 15, 2009, the Board issued revised proposed amendments to the Transmission System Code regarding cost responsibility associated with the connection of generation facilities to a transmission system.

2. Proposed Amendments to the DSC

The Board is proposing to amend the DSC to revise its approach to assigning cost responsibility as between a distributor and a generator in relation to renewable generator connections to distribution systems.

The Proposed Amendments are summarized below. The text of the Proposed Amendments to the DSC is set out in Attachment A to this Notice. Attachment B sets out, for information purposes, a table that describes different scenarios and how cost responsibility would be assigned to the distributor or the renewable generator under the Proposed Amendments.

A. Connection Cost Responsibility Options

The Board believes that revisions to its current approach to cost responsibility are desirable in order to facilitate the implementation of the Government's policy regarding the connection of renewable energy generation facilities. In evaluating the different options, the Board has considered three criteria. The first criterion is the anticipated beneficiary of the investment; in other words, the identification of distribution system investments that principally benefit the connecting renewable generator, versus those that have significant potential to benefit multiple generators and/or other end-users of a particular distribution system. The second criterion is efficiency; in other words, the provision of signals that will promote efficient connections and thereby reduce the need for additional distribution facilities in order to connect renewable generation. The third criterion is harmonization; in other words, to align cost responsibility with the obligation of distributors to plan to expand their distribution systems as directed by the Board in order to accommodate renewable generation (see section 2.B below).

For the purposes of assigning cost responsibility, the Board believes that distribution system investments related to the connection of renewable generation facilities can be classified within three general categories: connection assets; expansions; and "renewable enabling improvements". The Board believes that this classification accords with the nature of the principal beneficiaries of each type of investment, and thus with the appropriate cost responsibility treatment.

1. Connection Assets

"Connection assets" are defined in the DSC as "that portion of the distribution system used to connect a customer to the existing main distribution system, and consist of assets between the point of connection on a distributor's main distribution system and the ownership demarcation point with the customer". Connection assets are provided to enable the connection of a specific generation facility. Although not specifically defined as such, it is understood that these assets are not shared, and are not expected to be shared.

Currently, the costs of connection assets are borne by generators. The Board is of the view that this should continue, as the connecting generator is expected to be the sole beneficiary of the investment. Generator cost responsibility for connection assets will also encourage the efficient siting of generation facilities. The Board is, however, proposing to revise the definition of "connection assets" (section 1.2) to confirm that these assets are not expected to be shared by other customers.

2. Expansions

The DSC defines an "expansion" as "an addition to a distribution system in response to a request for additional customer connections that otherwise could not be made; for example, by increasing the length of the distribution system". An expansion is work done by a distributor as part of the DSC connection process to provide for the connection of a specific generation facility to a technically appropriate point on a feeder and/or substation. "Expansions" generally consist of the following:

- rebuilding a single-phase line to three-phase to the location of the generation facility
- rebuilding an existing line with a larger size conductor to the location of the generation facility
- rebuilding or overbuilding an existing line to provide an additional circuit to the location of the generation facility
- converting a lower voltage line to operate at higher voltage

The Board is of the view that most expansions will primarily benefit the connecting renewable generator at the time of connection, but over time may also benefit other load and generation customers.

Currently, the DSC makes provision for a rebate of a portion of the distribution system expansion costs where a subsequent generator connects to the distribution system and obtains the benefit of reinforcements paid for by an earlier generator. However, a subsequent generator may not materialize within a reasonable time frame, if at all. As a result, the Board believes that these costs should be shared between the connecting renewable generator and the distributor. The Board is proposing that these costs be shared based on an expansion cost cap. The Board is proposing to use a per MW approach to the application of the cap, to reflect that power supplied by a distributed

generator reduces withdrawals from the transmission system by a corresponding amount.

Under this proposal, a renewable generator would continue to pay the cost of the connection assets, but the distributor would be responsible for the costs of any system expansions up to the cap (in \$/MW connected). Incremental expansion costs beyond the cap would be borne by the generator. Imposing a cap would lower the costs that might otherwise be borne by renewable generators under the current approach, while preserving some locational signals for efficient siting. The cap would also limit the total exposure of the distributor's ratepayers to expansion costs.

The Board notes that the Renewable Energy Task Team, an organization that represents several of the major renewable power generators in the Province, has supported such an approach.² The Board believes this to be an appropriate approach in relation to the connection of renewable generation, and is proposing to amend the DSC accordingly (sections 1.2 (definition of "renewable energy expansion cost cap") and 3.2.5A).

The Board considered using the economic value that a distributed generation facility brings to the distribution system as the basis for determining the appropriate level of the cap. However, based on an earlier examination of the issue of the quantification of the benefits associated with distributed generation ("Distributed Generation: Rates and Connection", consultation process EB-2007-0630), the Board believes that this approach is not suited to the establishment of a uniform expansion cost cap given that the benefits are contingent on generation technology, facility location, and other factors.

Therefore, the Board is instead proposing to determine the "renewable energy expansion cost cap" based on representative expansion costs. Based on a review of the magnitude of expansion costs for feeder extensions associated with distributed generation connections, the Board is proposing to set the cap at \$90,000/MW (e.g., a generator with a 10 MW project would be required to pay for all expansion costs over \$900,000).

The Board derived the \$90,000/MW cap from a review of electricity distributor rate applications and from discussions with certain distributors. The costs of feeder extensions vary widely across distributors, ranging from \$175,000/km to \$300,000/km. The Board also reviewed the expansion requirements for almost 500 distributed generation projects, of which approximately 300 required feeder extensions. These projects were of an average size of 10 MW and required, on average, 5.3 km of feeder extensions. This suggests that the expansion costs associated with the connection of a distributed generation project that requires a feeder extension of average length is in the range of \$90,000/MW to \$150,000/MW.

² See, for example, Renewable Energy Task Team (2005), Comment on the Ministry of Energy's Discussion Paper "Electricity Transmission and Distribution in Ontario – A Look Ahead".

The Board is proposing the low end of this range for the cap at this time. The Board is particularly interested in comments from stakeholders on the proposed “renewable energy expansion cost cap”, both in respect of the proposed methodology for establishing the cap (based on representative expansion costs) and in respect of the level at which the cap should be set. The Board will be assisted in particular by further data regarding the expansion costs typically associated with the connection of generation facilities.

Some generation connections may trigger the need for upstream upgrades to the system of a host distributor or of a transmitter, in addition to triggering the need for the expansion of the distribution system to which the generation facility will be connected. Although the DSC is silent on the issue of cost responsibility for these upstream upgrades, the practice is for distributors to pass these costs on to the connecting generator. The Board does not propose to revise this approach at this time, but confirms that these upstream costs are not to be included in the calculation of the expansion cap. The Board believes that inclusion of these costs for purposes of calculating the expansion cap will create gaming opportunities for generators in terms of whether to connect their facilities to a distribution system or a transmission system.

3. Renewable Enabling Improvements

In addition to connection assets and expansions, the DSC currently makes provision for a further type of investment; namely, “enhancements”. An “enhancement” is defined as “a modification to an existing distribution system that is made for purposes of improving system operating characteristics such as reliability or power quality or for relieving system capacity constraints resulting, for example, from general load growth”. Costs of enhancements are not included in determining the capital contribution payable by a connecting customer unless they are completed as part of an expansion (see item (d) under the heading “Capital Costs” in Appendix B of the DSC).

The concept of “enhancement”, as currently defined and used in section 3.3.1 of the DSC, lends itself more to system investments that are planned and effected to address matters related to loads than to investments that are planned and effected to address the accommodation of renewable generation.

The Board is therefore proposing to include in the DSC a parallel concept – “renewable enabling improvements” – to address system investments that are made to enhance the ability of a distribution system to accommodate increased levels of renewable generation (section 1.2, definition of “renewable enabling improvement” and of “expansion”). “Renewable enabling improvements” consist of the following:

- modifications or additions to manage and control 2-way electrical flows, as opposed to radial flow
- modifications to, or the addition of, electrical protection equipment
- modifications to, or the addition of, voltage regulating equipment
- the provision of protection against islanding (transfer trip or equivalent)

The Board believes that these investments will likely be of broader benefit to the distributor and its existing and future customers (both generators and loads). Therefore, the Board also believes that the distributor should bear the cost of these investments, and therefore should not charge a renewable generator a capital contribution in relation to such investments. The Board is proposing to amend the DSC accordingly (sections 3.3.2 and 3.3.3). The Board is also proposing to clarify that an "enhancement" does not include a "renewable enabling improvement", in order to avoid any overlap between the two concepts (section 1.2, definition of "enhancement").

The Board believes that there is merit to consistency in the assignment of cost responsibility for "renewable enabling improvements" and "enhancements". Specifically, the Board is of the view that, when considered from the perspective of the persons that are expected to benefit, it is appropriate that a distributor bear the costs of all "enhancements". The Board is therefore also using this opportunity to revise section 3.3 and Appendix B of the DSC such that the cost of all "enhancements" are to be borne by distributors, even if done at the time of an expansion.

B. Distribution System Planning Process

As noted earlier, the *Green Energy and Green Economy Act, 2009* will introduce new deemed conditions of licence that require distributors to: (a) file for Board approval, in the manner and at the times mandated by the Board, plans for the expansion or reinforcement of their respective systems to accommodate the connection of renewable energy generation facilities; and (b) expand or reinforce their respective systems to accommodate the connection of renewable energy generation facilities in accordance with their respective Board-approved plans or as otherwise mandated by the Board.

As noted above, the Board is undertaking a separate consultation process to address infrastructure investment planning.

The Board anticipates that distributor investment plans will identify investments (both "renewable enabling improvements" and "expansions") that distributors will make in anticipation of the connection of renewable energy generation projects. The Board believes that these investments will be planned prior to, or regardless of, a specific generator requesting connection, and will likely be of broader benefit to the distributor and its existing and future customers (both generators and loads). Therefore, the Board also believes that the distributor should be responsible for the cost of investments that are identified in a Board-approved investment plan, and therefore should not charge a renewable generator a capital contribution in relation to such investments. The Board is proposing to also extend the same cost responsibility treatment to expansions and renewable enabling improvements that are otherwise approved or mandated by the Board. The Board's is proposing to amend the DSC accordingly (section 3.2.5A).

As set out in section 2.A.3 above, renewable enabling improvements are proposed to be the cost responsibility of the distributor regardless of whether or not they are identified in a Board-approved plan or are otherwise approved or mandated by the

Board. However, whereas cost responsibility for expansions that are not approved or mandated by the Board is proposed to be shared between the distributor and the renewable generator (see section 2.A.2 above), the same would not be true of expansions that are identified in a Board-approved plan or are otherwise approved or mandated by the Board. In other words, the “renewable energy expansion cost cap” would not apply to such expansions, and the distributor would have sole cost responsibility for them. The Board believes this to be an appropriate approach because the Board expects that expansions identified in an approved plan or that are otherwise approved or mandated by the Board would generally not be intended to address the particular needs of a specific connecting generator. Rather, they would be intended to accommodate renewable generation resources that are expected to emerge in a given part of the distributor’s service area in the future.

The Board expects that generators will site and time their projects to take advantage of capacity that is available or is planned to be available, such that their connections will minimize the need for additional investments.

C. Other Proposed Amendments

To support some of the Proposed Amendments above, the Board is also proposing to include in the DSC (section 1.2) definitions for the terms “renewable energy generation facility” and “renewable energy source”, by reference to the manner in which those terms are defined in the Act.

D. Anticipated Costs and Benefits

The Proposed Amendments will facilitate the achievement of the Government’s policy goals regarding the connection of renewable generation. They would better align cost responsibility with the benefits that are expected to accrue from different types of investments, and protect the interests of consumers by preserving incentives for generators to connect in areas where the costs of connection are lower.

Some or all of the investments that are proposed to be funded by a distributor may be eligible to be recovered from consumers across the Province. To the extent that this is the case, it will assist in mitigating the rate impact of the Proposed Amendments on a given distributor’s ratepayers. The Board’s oversight of a distributor’s capital plans for renewable enabling improvements and expansions, whether through the investment planning process, the rate-setting process or some other process, will ensure that these investments are made only where prudent, thereby also mitigating potential rate impacts.

3. Coming Into Force

The Board proposes that the Proposed Amendments to the DSC set out in Attachment A come into force on the date that the Proposed Amendments are published on the Board’s website after having been made by the Board.

With respect to expansions that are associated with an application to connect, the Board clarifies that the assignment of cost responsibility as set out in the Proposed Amendments would, if adopted, apply only to the extent that the expansion relates to an application to connect made after the date on which the Proposed Amendments come into force.

4. Cost Awards

Cost awards will be available under section 30 of the Act to eligible persons in relation to the provision of comments on the Proposed Amendments set out in Attachment A. Costs awarded will be recovered from all licensed electricity distributors based on their respective distribution revenues. Attachment C contains important information regarding cost awards for this notice and comment process, including in relation to eligibility requests and objections.

In order to facilitate a timely decision on cost eligibility, the deadlines for filing cost eligibility requests and objections will be strictly enforced.

Invitation to Comment

All interested parties are invited to comment in writing on the Proposed Amendments to the DSC set out in Attachment A by **June 30, 2009**.

Three (3) paper copies of each filing must be provided, and should be sent to:

Kirsten Walli
Board Secretary
Ontario Energy Board
P.O. Box 2319
2300 Yonge Street, Suite 2700
Toronto, Ontario M4P 1E4

The Board requests that interested parties make every effort to provide electronic copies of their filings in searchable/unrestricted Adobe Acrobat (PDF) format, and to submit their filings through the Board's web portal at www.errr.oeb.gov.on.ca. A user ID is required to submit documents through the Board's web portal. If you do not have a user ID, please visit the "e-filings services" webpage on the Board's website at www.oeb.gov.on.ca, and fill out a user ID password request. Additionally, interested parties are requested to follow the document naming conventions and document submission standards outlined in the document entitled "RESS Document Preparation – A Quick Guide" also found on the e-filing services webpage. If the Board's web portal is not available, electronic copies of filings may be filed by e-mail at boardsec@oeb.gov.on.ca.

Those that do not have internet access should provide a CD or diskette containing their filing in PDF format.

Filings to the Board must be received by the Board Secretary by **4:45 p.m.** on the required date. They must quote file number **EB-2009-0077** and include your name, address, telephone number and, where available, your e-mail address and fax number.

This Notice, including the Proposed Amendments to the DSC set out in Attachment A, and all written comments received by the Board in response to this Notice, will be available for public inspection on the Board's website at www.oeb.gov.on.ca and at the office of the Board during normal business hours.

Any questions relating to this consultation should be directed to Roy Hrab at 416-440-7745 or by e-mail to: roy.hrab@oeb.gov.on.ca. The Board's toll free number is 1-888-632-6273.

DATED at Toronto, June 5, 2009

ONTARIO ENERGY BOARD

Original signed by

Kirsten Walli
Board Secretary

Attachs: Attachment A: Proposed Amendments to the Distribution System Code

Attachment B: Current and Proposed Connection Cost Responsibility for Renewable Distributed Generation

Attachment C: Cost Awards

Attachment A

Proposed Amendments to the Distribution System Code

Note: The text of the proposed amendments is set out in italics below, for ease of identification only.

1. Section 1.2 of the Distribution System Code is amended as follows:

- (a) by deleting the definition of "connection assets" and replacing it with the following:

"connection assets" means a portion of the distribution system that (a) is used to connect a customer to the main distribution system and (b) is not, at the time of construction, reasonably expected to connect any other customer to the main distribution system, and consists of the assets between the point of connection on a distributor's main distribution system and the ownership demarcation point with that customer;

- (b) by deleting the definition of "enhancement" and replacing it with the following:

"enhancement" means a modification to the main distribution system that is made to improve system operating characteristics such as reliability or power quality or to relieve system capacity constraints resulting, for example, from general load growth, but does not include a renewable enabling improvement;

- (c) by deleting the definition of "expansion" and replacing it with the following:

"expansion" means an addition to the main distribution system in response to a request for additional customer connections that otherwise could not be made, for example, by increasing the length of the main distribution system, but in respect of a renewable energy generation facility excludes a renewable enabling improvement;

and

- (d) by adding the following immediately after the definition of "Regulations":

"renewable enabling improvement" means a modification or addition to the main distribution system identified in section 3.3.2 that is made to enable the main distribution system to accommodate generation from renewable energy generation facilities;

"renewable energy expansion cost cap" means, in relation to a renewable energy generation facility, the dollar amount determined by multiplying the total name-plate rated capacity of the renewable energy generation facility referred to in section 6.2.9(a) (in MW) by \$90,000;

"renewable energy generation facility" has the meaning given to it in the Act;

"renewable energy source" has the meaning given to it in the Act;

2. Section 3.2 of the Distribution System Code is amended by adding the following immediately after section 3.2.5:

3.2.5A Notwithstanding section 3.2.5, a distributor shall not charge a generator to construct an expansion to connect a renewable energy generation facility:

- (a) if the expansion is in a Board-approved plan filed with the Board by the distributor pursuant to the deemed condition of the distributor's licence referred to in paragraph 2 of subsection 70(2.1) of the Act, or is otherwise approved or mandated by the Board; or*
- (b) in any other case, for any costs of the expansion that are at or below the renewable energy generation facility's renewable energy expansion cost cap.*

For greater clarity, the distributor shall bear all costs of constructing an expansion referred to in (a) and, in the case of (b), shall bear all costs of constructing the expansion that are at or below the renewable energy generation facility's renewable energy expansion cost cap.

3. Section 3.3 of the Distribution System Code is amended by adding the following immediately after section 3.3.1:

3.3.2 Renewable enabling improvements to the main distribution system to accommodate the connection of renewable energy generation facilities are the following:

- (a) modifications or additions to allow for and accommodate 2-way electrical flows, as opposed to radial flow;*
- (b) modifications to, or the addition of, electrical protection equipment;*
- (c) modifications to, or the addition of, voltage regulating equipment; and*
- (d) the provision of protection against islanding (transfer trip or equivalent).*

3.3.3 *The distributor shall bear the cost of constructing an enhancement or making a renewable enabling improvement, and therefore shall not charge:*

- (a) a customer a capital contribution to construct an enhancement; or*
- (b) a customer that is connecting a renewable energy generation facility a capital contribution to make a renewable enabling improvement.*

4. Section B.1 of Appendix B of the Distribution System Code is amended by deleting paragraph (d) under the heading "Capital Costs".

Attachment B

Current and Proposed Connection Cost Responsibility for Renewable Distributed Generation

Investment type	Current Cost Responsibility	Proposed Cost Responsibility
Connection Assets: <ul style="list-style-type: none"> Dedicated facilities to connect a customer to the existing main distribution system. Not expected to be shared by other users. 	Generator	Generator
Expansions, including: <ul style="list-style-type: none"> rebuilding single-phase to three-phase to the generation facility location rebuilding an existing line with larger size conductor to the generation facility location rebuilding or overbuilding an existing line to provide an additional circuit to the generation facility location converting a lower voltage line to operate at higher voltage 	Generator	<p>When investment triggered by a specific generator connection:</p> <p style="text-align: center;">For costs up to cap: Distributor</p> <p style="text-align: center;">For costs above cap: Generator</p> <p>When investment contained in a Board-approved plan or otherwise approved or mandated by the Board:</p> <p style="text-align: center;">Distributor</p>
Renewable enabling improvements: <ul style="list-style-type: none"> Accommodating 2-way electrical flows Electrical protection facilities Voltage regulating equipment Protection against islanding (transfer trip or equivalent) 	Generator	Distributor

Attachment C

Cost Awards

Cost Award Eligibility

The Board will determine eligibility for costs in accordance with its *Practice Direction on Cost Awards*. Any person intending to request an award of costs must file with the Board a written submission to that effect by **June 19, 2009**, identifying the nature of the person's interest in this process and the grounds on which the person believes that it is eligible for an award of costs (addressing the Board's cost eligibility criteria as set out in section 3 of the Board's *Practice Direction on Cost Awards*). An explanation of any other funding to which the person has access must also be provided, as should the name and credentials of any lawyer, analyst or consultant that the person intends to retain, if known. All requests for cost eligibility will be posted on the Board's website.

Licensed electricity distributors will be provided with an opportunity to object to any of the requests for cost award eligibility. If an electricity distributor has any objections to any of the requests for cost eligibility, such objections must be filed with the Board by **June 26, 2009**. Any objections will be posted on the Board's website. The Board will then make a final determination on the cost eligibility of the requesting participants.

Eligible Activities

Cost awards will be available in relation to the provision of comments on the Proposed Amendments to the DSC set out in Attachment A **to a maximum of 20 hours**.

Cost Awards

When determining the amount of the cost awards, the Board will apply the principles set out in section 5 of its *Practice Direction on Cost Awards*. The maximum hourly rates set out in the Board's Cost Awards Tariff will also be applied. The Board expects that groups representing the same interests or class of persons will make every effort to communicate and co-ordinate their participation in this process.

The Board will use the process set out in section 12 of its *Practice Direction on Cost Awards* to implement the payment of the cost awards. Therefore, the Board will act as a clearing house for all payments of cost awards in this process. For more information on this process, please see the Board's *Practice Direction on Cost Awards* and the October 27, 2005 letter regarding the rationale for the Board acting as a clearing house for the cost award payments. These documents can be found on the Board's website at www.oeb.gov.on.ca on the "Rules, Guidelines and Forms" webpage.

NOTICE OF REVISED PROPOSAL TO AMEND A CODE
REVISED PROPOSED AMENDMENTS TO THE DISTRIBUTION SYSTEM
CODE

BOARD FILE NO: EB-2009-0077

To: All Licensed Electricity Distributors
All Licensed Generators
All Participants in Consultation Process EB-2009-0077

The Ontario Energy Board (the "Board") is giving notice under section 70.2 of the *Ontario Energy Board Act, 1998* (the "Act") of revised proposed amendments to the Distribution System Code (the "DSC").

I. Background

A. The June Proposed Amendments

On June 5, 2009, the Board issued a Notice of Proposal to Amend a Code (the "June Notice") in which it proposed a number of amendments to the DSC (the "June Proposed Amendments") that would revise the Board's current approach to assigning cost responsibility as between a distributor and a generator in relation to the connection of renewable generation facilities to distribution systems in a manner that would facilitate implementation of the Government's policy objectives regarding renewable generation. Under the June Proposed Amendments:

- distribution system investments related to the connection of renewable generation facilities would be classified within three general categories: "connection assets"; "expansions"; and "renewable enabling improvements";
- "connection assets" would continue to be paid for by generators;
- cost responsibility for "expansions" would be assigned as follows:

- where the expansion is in a Board-approved plan or is otherwise approved or mandated by the Board, the distributor would be responsible for all of the costs of the expansion; and
 - in all other cases, the distributor would be responsible for the costs of the expansion up to a "renewable energy expansion cost cap" (\$90,000 per MW of capacity of the connecting generator), and the generator would be responsible for all costs above that amount; and
- the distributor would bear all of the costs of "renewable enabling improvements".

The Board received 28 comments on the June Proposed Amendments from a variety of stakeholders, including the Ontario Power Authority ("OPA"), the Ontario Ministry of Agriculture, Food and Rural Affairs ("OMAFRA"), and representatives of distributors, generators, ratepayers and aboriginal communities. These are available for viewing on the Board's website at www.oeb.gov.on.ca on the "Distribution Connection Cost Responsibility" webpage which can be accessed from the "Green Energy Initiatives" portion of the website.

The Board has considered the comments received and has determined that revisions should be proposed to the June Proposed Amendments. The text of the revised proposed amendments (the "Revised Proposed Amendments") is set out in Attachment A to this Notice. For convenience, Attachment B contains a comparison version that shows all of the proposed revisions relative to the June Proposed Amendments.

B. Legislative Developments Since Issuance of the June Proposed Amendments

When the Board issued the June Proposed Amendments, the *Green Energy and Green Economy Act, 2009* had received Royal Assent, but had not yet been proclaimed. As noted in sections II and III.B below, in response to the June Notice a number of participants expressed concern regarding the Board proceeding with amendments regarding cost responsibility until the associated legislative framework has been completed.

The Board notes that all of the amendments to the *Electricity Act, 1998* and all of the amendments to the *Ontario Energy Board Act, 1998* contained in the *Green Energy and Green Economy Act, 2009* that are relevant to the subject-matter of this consultation were proclaimed into force on September 9, 2009. These include the amendment to the Act (subsection 1(1)) that adds a new objective for the Board in relation to the promotion of generation from renewable energy

sources, as well as the amendment to the Act (section 79.1) regarding the recovery of distributor costs associated with generator connections.

In addition, on September 9, 2009 a regulation was filed that completes the legislative framework for the cost recovery mechanism set out in section 79.1 of the Act (O. Reg. 330/09 (Cost Recovery re Section 79.1 of the Act)). In summary, the legislative framework provides as follows:

- a distributor is entitled to compensation (also referred to as rate protection) for Board-approved costs incurred in making an “eligible investment” to connect or enable the connection of a “qualifying generation facility”;
- an investment is an “eligible investment” if the associated costs are the responsibility of the distributor as set out in the DSC;
- a “qualifying generation facility” is a generation facility that satisfies the criteria necessary to be a renewable energy generation facility;
- the compensation to which a distributor is entitled will be recovered from consumers throughout the Province; and
- the compensation to which a distributor is entitled in relation to any given eligible investment will be calculated as the distributor’s costs associated with the investment less any amount that the Board determines to represent the direct benefits that accrue to the distributor’s consumers as a result of all or part of the investment.

The June Proposed Amendments proposed to shift responsibility for certain costs associated with the connection of renewable generation facilities from generators to distributors. The recent legislative developments make it clear that distributors are eligible for compensation or rate protection under section 79.1 of the Act in relation to all renewable generation connection costs that are proposed to be their responsibility under the DSC, provided that they are approved by the Board and subject to the Board’s assessment of any associated local benefits.

In the June Notice, the Board indicated that cost recovery is an issue that can be addressed separate and apart from that of cost responsibility. The Board remains of that view. Nonetheless, the Board confirms that its proposed approach to cost responsibility as set out in the June Proposed Amendments remains appropriate in the context of O. Reg. 330/09, subject only to the proposed revisions described in section III.A below.

II. Overview of Comments Received

The comments received from stakeholders covered a number of issues associated with the Board's proposed approach as described in the June Notice and the June Proposed Amendments. Distributor and generator representatives were generally supportive of the overall approach, although some sought greater clarity and some favoured reducing the cost burden borne by generators by more than that proposed in the June Proposed Amendments. Representatives of ratepayers were generally not supportive of the proposed approach, favouring retention of the Board's current cost responsibility model in which all of the costs of connection are borne by generators.

A number of participants expressed concern regarding the Board proceeding with amendments regarding connection cost responsibility until the legislative framework related to connection cost responsibility has been completed. This includes, notably, the regulations contemplated in section 79.1 of the Act (as noted above, this particular regulation has now been made) regarding the recovery of costs associated with generator connections. Other comments related to the definitions for each of the three investment categories, the basis for and the level of the "renewable energy expansion cost cap", the administration of rebates, and the application of the June Proposed Amendments to certain projects.

Further detail regarding the comments received, and the extent to and manner in which they are proposed to be addressed by the Board, is set out in section III below.

III. Proposed Revisions to the June Proposed Amendments

A. Issues Where Revisions to the June Proposed Amendments are Proposed

As discussed in section III.B below, the Board is proposing to retain the overall approach to generation connection cost responsibility as set out in the June Notice and the June Proposed Amendments. However, based on the comments received, the Board is proposing a certain number of revisions to the June Proposed Amendments. This section describes those proposed revisions.

i. Definition of "Connection Assets"

A number of stakeholders expressed a need for greater clarity regarding the definition of "connection assets" in order to reduce uncertainty regarding cost responsibility. Specifically, some stakeholders expressed a need for greater clarity regarding the interpretation of the phrase "is not, at the time of construction, reasonably expected to connect any other customer".

Connection assets are, by nature and design, assets that generally have the potential to serve only the connecting customer. However, given the concerns expressed by stakeholders the Board is proposing to delete the proposed amendment that would have added the phrase referred to above, and to leave the existing definition as is. Instead, the Board is proposing to provide further clarity by revising the definitions of “expansion” and “renewable enabling improvement” as described below.

The Board takes this opportunity to remind distributors that the Board expects distributors to expand or build out their distribution systems to reach connecting customers, and not the other way around. As such, the Board expects that distributors will not classify as connection assets lines designed to reach from the existing main distribution system to the customer’s location.

ii. *Definition of “Expansion”*

A number of stakeholders expressed a need for greater clarity about the assets and facilities that would fall into the category of “expansions” in order to reduce uncertainty regarding cost responsibility. The Board agrees that it would be useful to provide greater clarity in this area and is proposing to revise the definition of “expansion” in section 1.2 of the DSC and add a new section 3.2.30 to the DSC that provides an expanded list of specific investments or assets that fall within the category of “expansions”. These proposed revisions are based, in large part, on input provided by Hydro One.

In response to stakeholder comments, the Board is also proposing to revise the definition of “expansion” to make it clear that an expansion may be triggered by either one or more than one connection request.

iii. *Definition of “Renewable Enabling Improvement”*

A number of stakeholders expressed a need for greater clarity about the assets and facilities that would fall into the category of “renewable enabling improvements” in order to reduce uncertainty regarding cost responsibility. The Board agrees that it would be useful to provide greater clarity in this area and is proposing to revise section 3.3.2 of the DSC accordingly by providing an expanded list of specific investments or assets that fall within the category of “renewable enabling improvements”. These revisions are also based, in large part, on input provided by Hydro One.

The list of investments set out in section 3.3.2 of the DSC includes “the provision of protection against islanding (transfer trip or equivalent)”. Some stakeholders requested clarity about whether this means that transfer trip equipment located at a renewable generation facility is a “renewable enabling improvement”. The Board’s confirms that any assets or equipment located on the customer side of the point of connection do not form part of the main distribution system and are

properly classified as connection assets, even if they are assets or equipment identified in section 3.3.2.

iv. *Administration of Rebates*

Some stakeholders expressed concerns regarding the administration of rebates under the Board's proposed approach to cost responsibility.

Section 3.2.27 of the DSC addresses rebates to initial contributor(s) in the event that unforecasted customers connect to assets for which the initial contributor(s) made a capital contribution. The Board acknowledges that some revisions to the DSC are warranted to clarify how rebates are to be treated in the following circumstances: (a) when a renewable energy generator connects to the distribution system in respect of an expansion that was initially funded by either a load customer or a generator customer to whom the renewable energy expansion cost cap does not apply (i.e., generation projects that would pre-date the coming into force of the Revised Proposed Amendments); and (b) when a new customer connects to the distribution system in respect of an expansion that was previously funded by a renewable energy generator (i.e., where the cost of the expansion exceeded the initial generator's renewable energy expansion cost cap).

With respect to (a), the Board is proposing that a rebate be paid to the initial contributor(s). The rebate would be paid by the distributor to the initial contributor(s) and the connecting renewable generator's renewable energy expansion cost cap would be reduced by an equivalent amount. For example, if the connecting renewable generator's project is 1 MW and the rebate payable to the initial contributor is \$30,000, the distributor would pay \$30,000 to the initial contributor and reduce the generator's renewable energy expansion cost cap to \$60,000 (\$90,000 minus \$30,000). Where the amount of the rebate exceeds the connecting generator's renewable energy expansion cost cap, the distributor would collect any amount of the rebate that exceeds the cap from the connecting generator. For example, if the connecting renewable generator's project is 1 MW and the rebate payable to the initial contributor is \$120,000, the distributor would pay \$120,000 to the initial contributor and collect \$30,000 from the connecting generator (\$120,000 minus \$90,000).

With respect to (b), the Board is of the view that there should be no rebate payable to the initial renewable energy generator because, under the proposed approach, the generator would have previously benefitted from the reduction in connection costs provided by the proposed cost responsibility treatment for expansions and renewable enabling improvements.

The Board is proposing to amend the DSC (new sections 3.2.27A and 3.2.27B) to reflect the above approach.

v. *Application of the "Renewable Energy Expansion Cost Cap" where Multiple Generators Connect*

Some stakeholders requested clarification regarding how the renewable energy expansion cost cap would be applied and the remaining costs allocated in the event that an expansion was undertaken in response to more than one connection request. The Board believes that, in such a case, the renewable energy expansion cost cap should be determined based on the aggregate capacity of the generation projects (for example, if three projects of 5 MW each sought to connect, the aggregate capacity would be 15 MW and the available renewable energy expansion cost cap would be \$1.35 million). Any costs in excess of the cap would be allocated to the connecting renewable generators on a pro rata basis based on the name-plate rated capacity of each of the connecting generation facilities. The Board is proposing to amend the DSC (new sections 3.2.5B and 3.2.5C) accordingly.

vi. *Enhancement Costs*

The June Proposed Amendments included proposed amendments to the DSC in relation to cost responsibility for "enhancements". As indicated in the June Notice, the concept of enhancements lends itself to system investments that are planned and effected to address matters related to loads. The Board proposed to revise the definition of "enhancement" accordingly to clarify that enhancements do not include renewable enabling improvements. The Board also proposed to create symmetry in the assignment of cost responsibility for renewable enabling improvements and enhancements by having distributors bear the costs of enhancements (section 3.3.3 and section B.1 of Appendix B of the DSC).

Distributors expressed concern about the proposed amendments to section 3.3.3 and section B.1 of Appendix B of the DSC. Specifically, they noted that many distributors have had their rates set or are filing their cost of service applications based in part on the application of the existing methodology for determining cost responsibility and that these proposed amendments may have a significant impact on their capital requirements. The Board acknowledges this concern, and is proposing to revise the June Proposed Amendments (new section 3.3.4 and new paragraph (d.1) in section B.1 of Appendix B of the DSC) to confirm that those proposed amendments do not apply to a distributor until the distributor's rates have been rebased.

B. Issues Where No Revisions to the June Proposed Amendments are Proposed

This section sets out the Board's views on a number of issues associated with the June Proposed Amendments with respect to which the Board is not proposing any revisions.

i. Approach to Connection Cost Responsibility

Representatives of ratepayers expressed objections to the June Proposed Amendments on two main grounds. First, they commented that the June Proposed Amendments are inappropriate because they are incompatible with the principle of cost causality. Second, as noted above, they commented that the issue of cost recovery cannot be addressed separate and apart from that of cost responsibility, and therefore that any changes to the DSC should be delayed because, among other things, the Government had not yet made: (a) any regulation under section 79.1 of the Act; and (b) the new regulation-making power that empowers the Lieutenant Governor in Council to make regulations prescribing circumstances under which a transmitter or distributor shall bear the costs of construction, expansion or reinforcement associated with the connection of a renewable energy generation facility to the transmitter's transmission system or the distributor's distribution system (subsection 88(1)(g)(6.0.1) of the Act, added by the *Green Energy and Green Economy Act, 2009*).

As noted by the Board in the June Notice, the amendments to the Act set out in the *Green Energy and Green Economy Act, 2009* make it clear that the connection of renewable energy generation facilities is a policy matter of priority for the Government. The June Proposed Amendments were developed by the Board in order to facilitate the implementation of that policy. The Board remains of the view that the approach to connection cost responsibility embodied in the June Proposed Amendments will achieve that objective in a manner that is efficient, reflective of the anticipated beneficiary(ies) of different types of distribution system investments, and aligns the Board's cost responsibility rules with the obligations of distributors to plan to expand their systems as directed by the Board in order to accommodate renewable generation.

While cost causality is an important rate-making principle, the Board can and does apply other principles and account for other considerations in its decision-making. Other factors (i.e., the *Green Energy and Green Economy Act, 2009*) may come into play that the Board should consider.

With regards to cost recovery under section 79.1 of the Act versus cost responsibility, as discussed in section I.B above, the relevant regulation has now been made. As stated in the June Notice, the Board is aware of the new regulation-making power set out in subsection 88(1)(g)(6.0.1) of the Act, and recognizes that as and when any such regulations are made, the Board may

need to revisit the policies proposed in the June Notice and in this Notice. However, the Board is not persuaded that it is necessary or appropriate to defer completion of this initiative for that reason.

In addition to the views expressed by representatives of ratepayers, some representatives of distributors articulated a general concern about the shifting of cost responsibility for expansions and renewable enabling improvements that underlies the Board's proposed approach. Specifically, they were concerned that the proposed rules could impose a significant financial burden on distributors. As noted above, in accordance with O. Reg. 330/09 the cost of all of the investments that are proposed to be funded by a distributor are eligible to be recovered from consumers across the Province, provided that they are approved by the Board and subject to the Board's assessment of any associated local benefits. This will assist in mitigating the financial impact of the proposed approach on a given distributor. In addition, as set out in the Board's "Guidelines: Deemed Conditions of Licence: Distribution System Planning" (G-2009-0087), distributors who anticipate substantial expenses related to qualifying renewable connection investments and activities may apply for a funding adder to obtain advance funding for these investments and activities.

The Board notes the concerns expressed by some stakeholders to the effect that the Board's proposed approach does not create incentives for either distributors or generators to minimize costs. As discussed below, the Board's proposal to retain generator cost responsibility for upstream upgrades is expected to preserve incentives for generators to select more efficient connection points. With respect to distributors, the Board is satisfied that its regulatory oversight of distributor activities will allow it to ensure that distributor investments are prudent and reasonable in the circumstances.

ii. Definition of "Main Distribution System"

Some stakeholders stated that the term "main distribution system" in the DSC should be defined. The term "main distribution system" has been used in the DSC for some time to distinguish between connection assets (which are not part of the "main distribution system") and all other portions of a distribution system. The Board is not aware of this concept having been previously identified as a source of uncertainty, and does not believe that any further revisions to the DSC are required in relation to this issue.

iii. Determining the "Renewable Energy Expansion Cost Cap"

Many stakeholders commented on the level of the renewable energy expansion cost cap in the June Proposed Amendments (\$90,000 for each MW of capacity). Representatives of generators generally argued that it is too low (for example, one generator representative recommended that the cap be raised to \$125,000 per MW of capacity). In contrast, one distributor representative and ratepayer representatives generally argued that the cap is too high (for example, the

distributor representative recommended that the cap be lowered to \$75,000 per MW of capacity).

Stakeholders also commented on the basis of the cap. Some recommended that the cap be based on a generation facility's anticipated production or capacity factor rather than on name-plate rated capacity (per MW). Some stakeholders suggested that the cap could be based on a \$/km basis. In addition, some commented that it may be appropriate for the cap to vary by distributor or region (e.g., rural vs. urban), while others suggested that more should be done to reduce connection costs for farm and community-based renewable energy projects.

The Board acknowledges that there are alternatives to the methodology that the Board has proposed for setting the renewable energy expansion cost cap that may not be inappropriate. However, the alternatives suggested by stakeholders, such as those based on anticipated production and capacity factor, would appear to entail greater complexity, and the Board is not persuaded that any incremental benefits or advantages that may flow from an alternative methodology are sufficient to outweigh the added complexity. In addition, the Board believes that a thorough evaluation and the appropriate implementation of any alternative methodology cannot be done without actual production and connection cost data that will only become available as the connection of renewable generation facilities to distribution systems becomes more widespread. The Board has therefore concluded that the basis for determining the renewable energy expansion cost cap (based on representative expansion costs) as set out in the June Proposed Amendments should not be changed at this time.

With respect to the amount of the cap, as stated in the June Notice the Board's proposed cap of \$90,000 per MW of capacity was developed based on a review of distributor rate applications and discussions with certain distributors. The Board indicated in the June Notice that it would be assisted in particular by further data regarding the expansion costs typically associated with the connection of generation facilities. The comments received in response to the June Notice generally did not provide such data, or did not provide it at a necessary level of detail. Accordingly, the Board has no basis on which to believe that the cap as proposed materially underestimates or overestimates expansion costs. The Board may, with the benefit of additional data and further experience regarding expansion costs associated with the connection of renewable generation facilities, revisit the amount of the cap if warranted.

iv. Upstream Costs

Some stakeholders commented that it was unclear how cost responsibility for upstream costs for certain investments would be assigned. In particular, some stakeholders expressed uncertainty about who would bear the costs of upstream renewable enabling improvements. As indicated in the June Notice, the DSC is

generally silent on the issue of cost responsibility for upstream upgrades, and the practice is for distributors to pass these costs on to the connecting generator. The Board confirms that the cost responsibility rules set out in the June Proposed Amendments and in these Revised Proposed Amendments relate specifically to investments made by the distributor to whose system the renewable generation facility is connecting. The costs of any upgrades to the system of a host distributor or of a transmitter, including upgrades that would qualify as a renewable enabling improvement if made by the distributor to which the generation facility is connecting, would continue to be the responsibility of the generator.

Some stakeholders recommended that the renewable energy expansion cost cap should be applied towards the funding of upstream host distributor and transmitter upgrade costs triggered by the generator connection. In other words, where the cost of connecting to a distribution system is below the cap, the remaining amount should be available to the generator to off-set the cost of any host distributor or transmitter upgrades.

The Board believes that inclusion of these upstream costs for purposes of calculating the renewable energy expansion cost cap may reduce incentives for renewable generation proponents to select efficient connection points. For example, if upstream costs were included as part of the cap, a 10 MW generator (with a \$900,000 renewable energy expansion cost cap) would be indifferent between: (1) a connection point at an embedded distribution system which triggered embedded expansion costs of \$400,000 and upstream (host distributor) expansion costs of \$500,000; and (2) connecting to the host distributor triggering \$500,000 in expansion costs with no further upstream costs. In such situations, the generator's preferred connection point would be based on minimizing the costs of its connection assets without regard for the costs associated with the expansion of the distribution and/or transmission system.

Therefore, excluding upstream costs from the calculation of the renewable energy expansion cost cap will impose discipline on the costs associated with the connection of distributed renewable generation by providing incentives for generators to seek out lower cost connection points.

The Board recognizes that some generation proponents will have greater flexibility in terms of siting than others. The Board expects that host distributors will be mindful of the implications of renewable generation connections that are anticipated to occur to the systems of their embedded distributors, and will plan their own systems accordingly. This is part and parcel of responsible planning to accommodate renewable generation. As such, the Board therefore also expects that the distribution system planning process, and the cost responsibility consequences that flow from it particularly in relation to renewable enabling improvements, can mitigate the implications of limited siting flexibility.

v. *Aboriginal Consultation and First Nations/Northern Communities*

The national representative organization for the First Nations in Canada recommended that, because of certain issues of a predominantly socio-economic nature relating to First Nations communities, the Board should exempt renewable energy generation projects from all connection related costs where there is an aboriginal or aboriginal partnership proponent.

The Board understands these concerns, but believes that any resolution of these issues is more properly addressed by means other than rules associated with cost responsibility for connecting distributed renewable generation. The Board notes, in this regard, that the *Green Energy and Green Economy Act, 2009* gives the Minister of Energy and Infrastructure the authority to direct the OPA to implement procedures for consulting aboriginal peoples (among others) in relation to the planning and development of distribution systems and to establish measures to facilitate the participation of aboriginal peoples in the development of renewable generation facilities and distribution systems.

vi. *Contestable Work/Alternative Bid Option*

Some stakeholders expressed a need for greater clarity regarding the application of the DSC rules regarding contestable work and the alternative bid option for projects that would be subject to the proposed new cost responsibility rules.

Under section 3.2.14 of the DSC, a customer that is required to pay a capital contribution is entitled to obtain and use alternative bids for contestable work associated with an expansion. The Board confirms that the contestability and alternative bid provisions of the DSC apply in circumstances where the cost of an expansion exceeds the renewable energy expansion cost cap, such that the renewable generator is making a capital contribution towards the cost of the expansion. The Board confirms that this is the case regardless of the dollar amount of the capital contribution.

vii. *Combined Heat and Power Generation*

Some stakeholders commented that the proposed approach to connection cost responsibility should be extended to distributed combined heat and power ("CHP") generation projects. The Board notes that the *Green Energy and Green Economy Act, 2009* is intended to facilitate and promote the connection of *renewable generation*, and that the Board's new objective is worded as such. A CHP generation project that wished to be subject to the proposed new cost responsibility rules could achieve that end by qualifying as a "renewable energy generation facility".

IV. Anticipated Costs and Benefits

The anticipated costs and benefits of the June Proposed Amendments were set out in the June Notice, and interested parties should refer to the June Notice for further information in that regard.

The Board believes that the Revised Proposed Amendments will provide greater clarity in terms of the implementation of the proposed connection cost responsibility rules relative to the June Proposed Amendments. The Board does not believe that the Revised Proposed Amendments will result in incremental costs for distributors, generators or ratepayers relative to the costs associated with implementation of the June Proposed Amendments.

V. Coming Into Force

As was the case with the June Proposed Amendments, the Board is proposing that the Revised Proposed Amendments to the DSC come into force on the date on which they are published on the Board's website after having been made by the Board.

In the June Notice, the Board stated that the assignment of cost responsibility under the June Proposed Amendments would only apply on a prospective basis to expansions that relate to an application to connect made after the date on which the June Proposed Amendments come into force. Some stakeholders requested more clarity regarding the meaning of an "application to connect" with respect to the projects that would be captured by the June Proposed Amendments. Further, some stakeholders recommended that certain generation projects in the process of connecting to the distribution system prior to the coming into force of the proposed amendments should benefit from the proposed amendments. For example, one stakeholder recommended that the June Proposed Amendments should apply to all generation projects other than those that have been connected to the distribution system and reached commercial operations by the date of coming into force of the June Proposed Amendments.

The Board does not believe that generation projects that commenced the connection process prior to the date of coming into force of the proposed new connection cost responsibility rules should be subject to those rules. Such projects were developed and proceeded with the connection process on the basis of the current cost responsibility rules and those rules and the resultant costs would have been factored in to the project economics.

With respect to distribution system investments related to the connection of renewable generation facilities that are intended to be covered by the Revised Proposed Amendments, the Board confirms that the Revised Proposed Amendments would, if adopted, apply only to investments associated with renewable generation projects for which an application to connect was made on,

or after, the date on which the Revised Proposed Amendments come into force. The date of application means the date on which the generator files with a distributor the necessary materials to formally request a connection to the distribution system as described in the applicable portion of Appendix F of the DSC ("Process and Technical Requirements for Connecting Embedded Generation Facilities"), which describes the different steps in the connection process for different sizes of generation facility. As set out in Appendix F of the DSC, in applicable cases the application to connect would include a request for a connection impact assessment.

VI. Cost Awards

Cost awards will be available under section 30 of the Act to eligible persons in relation to the provision of comments on the Revised Proposed Amendments set out in Attachment A, **to a maximum of 10 hours.**

VII. Invitation to Comment

All interested parties are invited to comment in writing on the Revised Proposed Amendments to the DSC set out in Attachment A by **September 25, 2009**. The Board does not intend to revisit its proposal to adopt the approach to connection cost responsibility, the basis and level of the "renewable energy expansion cost cap", or the approach to the issues identified in section III.B above, and therefore asks interested parties to restrict their comments to the proposed revisions set out in section III.A above.

Three (3) paper copies of each filing must be provided, and should be sent to:

Kirsten Walli
Board Secretary
Ontario Energy Board
P.O. Box 2319
2300 Yonge Street, Suite 2700
Toronto, Ontario M4P 1E4

The Board requests that interested parties make every effort to provide electronic copies of their filings in searchable/unrestricted Adobe Acrobat (PDF) format, and to submit their filings through the Board's web portal at www.errr.oeb.gov.on.ca. A user ID is required to submit documents through the Board's web portal. If you do not have a user ID, please visit the "e-filings services" webpage on the Board's website at www.oeb.gov.on.ca, and fill out a user ID password request. Additionally, interested parties are requested to follow the document naming conventions and document submission standards outlined in the document entitled "RESS Document Preparation – A Quick Guide" also found on the e-filing

services webpage. If the Board's web portal is not available, electronic copies of filings may be filed by e-mail at boardsec@oeb.gov.on.ca.

Those that do not have internet access should provide a CD or diskette containing their filing in PDF format.

Filings to the Board must be received by the Board Secretary by **4:45 p.m.** on the required date. They must quote file number **EB-2009-0077** and include your name, address, telephone number and, where available, your e-mail address and fax number.

This Notice, including the Revised Proposed Amendments to the DSC set out in Attachment A, and all written comments received by the Board in response to this Notice, will be available for public inspection on the Board's website at www.oeb.gov.on.ca and at the office of the Board during normal business hours.

Any questions relating to this consultation should be directed to Roy Hrab at 416-440-7745 or by e-mail to: roy.hrab@oeb.gov.on.ca. The Board's toll free number is 1-888-632-6273.

DATED at Toronto, September 11, 2009.

ONTARIO ENERGY BOARD

Yours truly,

Original Signed By

Kirsten Walli
Board Secretary

Attachs:

Attachment A: Revised Proposed Amendments to the Distribution System Code

Attachment B: Comparison Version Showing Revised Proposed Amendments to the Distribution System Code relative to the June Proposed Amendments (for information purposes only)

Revised Proposed Amendments to the Distribution System Code

Note: The text of the proposed amendments is set out in italics below, for ease of identification only.

1. Section 1.2 of the Distribution System Code is amended as follows:

- (a) by deleting the definition of “enhancement” and replacing it with the following:

“enhancement” means a modification to the main distribution system that is made to improve system operating characteristics such as reliability or power quality or to relieve system capacity constraints resulting, for example, from general load growth, but does not include a renewable enabling improvement;

- (b) by deleting the definition of “expansion” and replacing it with the following:

“expansion” means a modification or addition to the main distribution system in response to one or more requests for one or more additional customer connections that otherwise could not be made, for example, by increasing the length of the main distribution system, but in respect of a renewable energy generation facility excludes a renewable enabling improvement, and includes the modifications or additions to the main distribution system identified in section 3.2.30;

and

- (c) by adding the following immediately after the definition of “Regulations”:

“renewable enabling improvement” means a modification or addition to the main distribution system identified in section 3.3.2 that is made to enable the main distribution system to accommodate generation from renewable energy generation facilities;

“renewable energy expansion cost cap” means, in relation to a renewable energy generation facility, the dollar amount determined by multiplying the total name-plate rated capacity of the renewable energy generation facility referred to in section 6.2.9(a) (in MW) by \$90,000, reduced where applicable in accordance with section 3.2.27A;

“renewable energy generation facility” has the meaning given to it in the Act;

“renewable energy source” has the meaning given to it in the Act;

2. Section 3.2 of the Distribution System Code is amended by adding the following immediately after section 3.2.5:

3.2.5A Notwithstanding section 3.2.5 but subject to section 3.2.5B, a distributor shall not charge a generator to construct an expansion to connect a renewable energy generation facility:

- (a) if the expansion is in a Board-approved plan filed with the Board by the distributor pursuant to the deemed condition of the distributor’s licence referred to in paragraph 2 of subsection 70(2.1) of the Act, or is otherwise approved or mandated by the Board; or*
- (b) in any other case, for any costs of the expansion that are at or below the renewable energy generation facility’s renewable energy expansion cost cap.*

For greater clarity, the distributor shall bear all costs of constructing an expansion referred to in (a) and, in the case of (b), shall bear all costs of constructing the expansion that are at or below the renewable energy generation facility’s renewable energy expansion cost cap.

3.2.5B Where an expansion is undertaken in response to a request for the connection of more than one renewable energy generation facility, a distributor shall not charge any of the requesting generators to construct the expansion:

- (a) if the expansion is in a Board-approved plan filed with the Board by the distributor pursuant to the deemed condition of the distributor’s licence referred to in paragraph 2 of subsection 70(2.1) of the Act, or is otherwise approved or mandated by the Board; or*
- (b) in any other case, for any costs of the expansion that are at or below the amount that results from adding the total name-plate rated capacity of each renewable energy generation facility referred to in section 6.2.9(a) (in MW) and then multiplying that number by \$90,000.*

For greater clarity, the distributor shall bear all costs of constructing an expansion referred to in (a) and, in the case of (b), shall bear all costs of constructing the expansion that are at or below the number that results from the calculation referred to in (b).

- 3.2.5C Where, in accordance with the calculation referred to in section 3.2.5B(b), a capital contribution is payable by the requesting generators, the distributor shall apportion the amount of the capital contribution among the requesting generators on a pro-rata basis based on the total name-plate rated capacity of the renewable energy generation facility referred to in section 6.2.9(a) (in MW).*
3. Section 3.2 of the Distribution System Code is amended by adding the following immediately after section 3.2.27:
- 3.2.27A Notwithstanding section 3.2.27, when the unforecasted customer is a renewable energy generation facility to which section 3.2.5A or 3.2.5B applies and the customer entitled to a rebate under section 3.2.27 is a load customer or a generation customer to which neither section 3.2.5A nor 3.2.5B applies, the initial contributors shall be entitled to a rebate from the distributor in an amount determined in accordance with section 3.2.27. The distributor shall reduce the connecting renewable energy generation facility's renewable energy expansion cost cap by an amount equal to the rebate. If the amount of the rebate exceeds the connecting renewable generation facility's renewable energy expansion cost cap, the distributor shall also collect the difference from the connecting renewable energy generation customer.*
- 3.2.27B Notwithstanding section 3.2.27, where the initial contributor was a renewable energy generation facility to which section 3.2.5A or 3.2.5B applies, the renewable energy generation customer shall not be entitled to any rebate from the distributor in the event of the connection of any unforecasted customer(s).*
4. Section 3.2 of the Distribution System Code is amended by adding the following immediately after section 3.2.29:
- 3.2.30 In the case of a generator customer connecting a renewable energy generation facility, an expansion of the main distribution system includes:*
- (a) building a new line to serve the renewable energy generation facility;*

- (b) *rebuilding a single-phase line to three-phase to serve the renewable energy generation facility;*
- (c) *rebuilding an existing line with a larger size conductor to serve the renewable energy generation facility;*
- (d) *rebuilding or overbuilding an existing line to provide an additional circuit to serve the renewable energy generation facility;*
- (e) *converting a lower voltage line to operate at higher voltage;*
- (f) *replacing a transformer to a larger MVA size;*
- (g) *upgrading a regulating station transformer to a larger MVA size; and*
- (h) *adding or upgrading capacitor banks to accommodate the connection of the renewable energy generation facility.*

5. Section 3.3 of the Distribution System Code is amended by adding the following immediately after section 3.3.1:

3.3.2 *Renewable enabling improvements to the main distribution system to accommodate the connection of renewable energy generation facilities are the following:*

- (a) *modifications to, or the addition of, electrical protection equipment;*
- (b) *modifications to, or the addition of, voltage regulating equipment;*
- (c) *the provision of protection against islanding (transfer trip or equivalent);*
- (d) *bidirectional reclosers;*
- (e) *tap-changer controls or relays;*
- (f) *replacing breaker protection relays;*
- (g) *Supervisory Control and Data Acquisition system design, construction and connection;*

(h) any other modifications or additions to allow for and accommodate 2-way electrical flows or reverse flows; and

(i) communication systems to facilitate the connection of renewable energy generation facilities.

3.3.3 Subject to section 3.3.4, the distributor shall bear the cost of constructing an enhancement or making a renewable enabling improvement, and therefore shall not charge:

(a) a customer a capital contribution to construct an enhancement; or

(b) a customer that is connecting a renewable energy generation facility a capital contribution to make a renewable enabling improvement.

3.3.4 Section 3.3.3(a) shall not apply to a distributor until the distributor's rates are set based on a cost of service application for the first time after this section comes into force.

6. Section B.1 of Appendix B of the Distribution System Code is amended by adding the following immediately after paragraph (d) under the heading "Capital Costs":

(d.1) paragraph (d) shall cease to apply to a distributor as of the date on which the distributor's rates are set based on a cost of service application for the first time after this paragraph comes into force.

Attachment B

Comparison Version Showing Revised Proposed Amendments to the Distribution System Code relative to the June Proposed Amendments (for information purposes only)

Note: The text of the proposed amendments is set out in italics below, for ease of identification only.

1. Section 1.2 of the Distribution System Code is amended as follows:

(a) by deleting the definition of "connection assets" and replacing it with the following:

~~"connection assets" means a portion of the distribution system that (a) is used to connect a customer to the main distribution system and (b) is not, at the time of construction, reasonably expected to connect any other customer to the main distribution system, and consists of the assets between the point of connection on a distributor's main distribution system and the ownership demarcation point with that customer;~~

(b) by deleting the definition of "enhancement" and replacing it with the following:

"enhancement" means a modification to the main distribution system that is made to improve system operating characteristics such as reliability or power quality or to relieve system capacity constraints resulting, for example, from general load growth, but does not include a renewable enabling improvement;

(c) by deleting the definition of "expansion" and replacing it with the following:

"expansion" means ~~an~~ a modification or addition to the main distribution system in response to ~~a request~~ one or more requests for one or more additional customer connections that otherwise could not be made, for example, by increasing the length of the main distribution system, but in respect of a renewable energy generation facility excludes a renewable enabling improvement, and includes the modifications or additions to the main distribution system identified in section 3.2.30;

and

- (dc) by adding the following immediately after the definition of "Regulations":

"renewable enabling improvement" means a modification or addition to the main distribution system identified in section 3.3.2 that is made to enable the main distribution system to accommodate generation from renewable energy generation facilities;

"renewable energy expansion cost cap" means, in relation to a renewable energy generation facility, the dollar amount determined by multiplying the total name-plate rated capacity of the renewable energy generation facility referred to in section 6.2.9(a) (in MW) by \$90,000, reduced where applicable in accordance with section 3.2.27A;

"renewable energy generation facility" has the meaning given to it in the Act;

"renewable energy source" has the meaning given to it in the Act;

2. Section 3.2 of the Distribution System Code is amended by adding the following immediately after section 3.2.5:

3.2.5A Notwithstanding section 3.2.5 but subject to section 3.2.5B, a distributor shall not charge a generator to construct an expansion to connect a renewable energy generation facility:

- (a) if the expansion is in a Board-approved plan filed with the Board by the distributor pursuant to the deemed condition of the distributor's licence referred to in paragraph 2 of subsection 70(2.1) of the Act, or is otherwise approved or mandated by the Board; or*
- (b) in any other case, for any costs of the expansion that are at or below the renewable energy generation facility's renewable energy expansion cost cap.*

For greater clarity, the distributor shall bear all costs of constructing an expansion referred to in (a) and, in the case of (b), shall bear all costs of constructing the expansion that are at or below the renewable energy generation facility's renewable energy expansion cost cap.

3.2.5B Where an expansion is undertaken in response to a request for the connection of more than one renewable energy generation facility,

a distributor shall not charge any of the requesting generators to construct the expansion:

- (a) if the expansion is in a Board-approved plan filed with the Board by the distributor pursuant to the deemed condition of the distributor's licence referred to in paragraph 2 of subsection 70(2.1) of the Act, or is otherwise approved or mandated by the Board; or
- (b) in any other case, for any costs of the expansion that are at or below the amount that results from adding the total name-plate rated capacity of each renewable energy generation facility referred to in section 6.2.9(a) (in MW) and then multiplying that number by \$90,000.

For greater clarity, the distributor shall bear all costs of constructing an expansion referred to in (a) and, in the case of (b), shall bear all costs of constructing the expansion that are at or below the number that results from the calculation referred to in (b).

3.2.5C Where, in accordance with the calculation referred to in section 3.2.5B(b), a capital contribution is payable by the requesting generators, the distributor shall apportion the amount of the capital contribution among the requesting generators on a pro-rata basis based on the total name-plate rated capacity of the renewable energy generation facility referred to in section 6.2.9(a) (in MW).

3. Section 3.32 of the Distribution System Code is amended by adding the following immediately after section 3.3+2.27:

3.2.27A Notwithstanding section 3.2.27, when the unforecasted customer is a renewable energy generation facility to which section 3.2.5A or 3.2.5B applies and the customer entitled to a rebate under section 3.2.27 is a load customer or a generation customer to which neither section 3.2.5A nor 3.2.5B applies, the initial contributors shall be entitled to a rebate from the distributor in an amount determined in accordance with section 3.2.27. The distributor shall reduce the connecting renewable energy generation facility's renewable energy expansion cost cap by an amount equal to the rebate. If the amount of the rebate exceeds the connecting renewable generation facility's renewable energy expansion cost cap, the distributor shall also collect the difference from the connecting renewable energy generation customer.

3.2.27B Notwithstanding section 3.2.27, where the initial contributor was a renewable energy generation facility to which section 3.2.5A or

3.2.5B applies, the renewable energy generation customer shall not be entitled to any rebate from the distributor in the event of the connection of any unforecasted customer(s).

4. Section 3.2 of the Distribution System Code is amended by adding the following immediately after section 3.2.29:

3.2.30 In the case of a generator customer connecting a renewable energy generation facility, an expansion of the main distribution system includes:

- (a) building a new line to serve the renewable energy generation facility;
- (b) rebuilding a single-phase line to three-phase to serve the renewable energy generation facility;
- (c) rebuilding an existing line with a larger size conductor to serve the renewable energy generation facility;
- (d) rebuilding or overbuilding an existing line to provide an additional circuit to serve the renewable energy generation facility;
- (e) converting a lower voltage line to operate at higher voltage;
- (f) replacing a transformer to a larger MVA size;
- (g) upgrading a regulating station transformer to a larger MVA size; and
- (h) adding or upgrading capacitor banks to accommodate the connection of the renewable energy generation facility.

5. Section 3.3 of the Distribution System Code is amended by adding the following immediately after section 3.3.1:

3.3.2 Renewable enabling improvements to the main distribution system to accommodate the connection of renewable energy generation facilities are the following:

- ~~(a) — modifications or additions to allow for and accommodate 2-way electrical flows, as opposed to radial flow;~~

~~(b) —~~

- (a) *modifications to, or the addition of, electrical protection equipment;*
- (b) ~~(e)~~ *modifications to, or the addition of, voltage regulating equipment; and*
- (c) ~~(d)~~ *the provision of protection against islanding (transfer trip or equivalent);*
- (d) *bidirectional reclosers;*
- (e) *tap-changer controls or relays;*
- (f) *replacing breaker protection relays;*
- (g) *Supervisory Control and Data Acquisition system design, construction and connection;*
- (h) *any other modifications or additions to allow for and accommodate 2-way electrical flows or reverse flows; and*
- (i) *communication systems to facilitate the connection of renewable energy generation facilities.*

3.3.3 ~~The~~ Subject to section 3.3.4, the distributor shall bear the cost of constructing an enhancement or making a renewable enabling improvement, and therefore shall not charge:

- (a) *a customer a capital contribution to construct an enhancement; or*
- (b) *a customer that is connecting a renewable energy generation facility a capital contribution to make a renewable enabling improvement.*

3.3.4 Section 3.3.3(a) shall not apply to a distributor until the distributor's rates are set based on a cost of service application for the first time after this section comes into force.

6. Section B.1 of Appendix B of the Distribution System Code is amended by ~~deleting~~ adding the following immediately after paragraph (d) under the heading "Capital Costs":

(d.1) paragraph (d) shall cease to apply to a distributor as of the date on which the distributor's rates are set based on a cost of service application for the first time after this paragraph comes into force.

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NOTICE OF AMENDMENT TO A CODE

AMENDMENTS TO THE DISTRIBUTION SYSTEM CODE

BOARD FILE NO: EB-2009-0077

**To: All Licensed Electricity Distributors
All Licensed Generators
All Participants in Consultation Process EB-2009-0077
All Other Interested Parties**

The Ontario Energy Board (the "Board") has today amended the Distribution System Code (the "DSC") as indicated in sections II and III below, pursuant to section 70.2 of the *Ontario Energy Board Act, 1998* (the "Act").

The Board is also advising interested parties that it will initiate a separate notice and comment process to address one outstanding issue, as discussed in section IV below.

I. Background

On June 5, 2009, the Board issued a Notice of Proposal to Amend a Code (the "June Notice") in which it proposed a number of amendments to the DSC (the "June Proposed Amendments") that would revise the Board's current approach to assigning cost responsibility as between a distributor and a generator in relation to the connection of renewable generation facilities to distribution systems in a manner that would facilitate implementation of the Government's policy objectives regarding renewable generation. Under the June Proposed Amendments:

- distribution system investments related to the connection of renewable generation facilities would be classified within three general categories: "connection assets"; "expansions"; and "renewable enabling improvements";

- “connection assets” would continue to be paid for by generators;
- cost responsibility for “expansions” would be assigned as follows:
 - where the expansion is in a Board-approved plan or is otherwise approved or mandated by the Board, the distributor would be responsible for all of the costs of the expansion; and
 - in all other cases, the distributor would be responsible for the costs of the expansion up to a “renewable energy expansion cost cap” (\$90,000 per MW of capacity of the connecting generator), and the generator would be responsible for all costs above that amount; and
- the distributor would bear all of the costs of “renewable enabling improvements”.

The June Notice set out background information relating to connection cost responsibility in general and identified the rationale for the June Proposed Amendments.

The Board received written comments on the June Proposed Amendments from a variety of stakeholders, including the Ontario Power Authority (“OPA”), the Ontario Ministry of Agriculture, Food and Rural Affairs, and representatives of distributors, generators, ratepayers and aboriginal communities.

On September 11, 2009, the Board issued a subsequent Notice (the “September Notice”) which incorporated a number of further proposed amendments (the “September Proposed Amendments”) arising as a result of the Board’s consideration of the comments provided by interested parties on the June Proposed Amendments.

The Board received written comments on the September Proposed Amendments from 14 interested parties, including representatives of electricity distributors, generators, ratepayers and the OPA.

The comments received on the June Proposed Amendments and the September Proposed Amendments are available for viewing on the Board’s website at www.oeb.gov.on.ca

II. Adoption of September Proposed Amendments with Revisions

The Board has considered the comments received in response to the September Notice, and has determined that, with the exception discussed in section IV below, no material changes are required to the September Proposed Amendments. The Board has therefore adopted most of the September Proposed Amendments with the modifications discussed in section III below, which the Board considers warranted in order to add clarity (the "Final Amendments").

The Final Amendments to the DSC as adopted by the Board are set out in Attachment A to this Notice. Attachment B to this Notice sets out, for information, a comparison version of the Final Amendments relative to the DSC as it existed prior to the adoption of the Final Amendments.

III. Summary of Comments and Identification of Revisions to the September Proposed Amendments as Adopted by the Board

The following provides a high-level summary of the more significant comments received on the September Proposed Amendments and identifies the revisions to the September Proposed Amendments that the Board has adopted as part of the Final Amendments.

In their comments on the September Proposed Amendments, certain stakeholders reiterated comments or suggestions that they had provided on the June Proposed Amendments but that were not accepted by the Board when it revised its proposed approach and issued the September Notice. The Board is generally not persuaded that its approach to these issues needs to be revised, and those comments or suggestions are therefore generally not addressed further in the discussion that follows.

A. Categories of Investment

Most stakeholders that commented on the proposal to revert to the existing definition of "connection assets" were supportive of the Board's approach.

Some stakeholders requested confirmation about whether the definitions of the terms "expansion" and "renewable enabling improvement" are intended to be exhaustive or illustrative. Other stakeholders noted that one of those terms ("renewable enabling improvement") appears to be defined in an exhaustive manner whereas the other

("expansion") is not, and suggested that both should be illustrative. In the Board's view, having two illustrative definitions will increase the likelihood that a given investment could potentially be included in both categories, thus creating uncertainty that that Board believes should be avoided. The Board therefore remains of the view that the term "renewable enabling improvement" should remain defined in an exhaustive manner, and that any investment that does not fit within that exhaustive definition should be treated as an "expansion" (unless it is a "connection asset"). One stakeholder suggested revisions to the definitions that would more clearly reflect this approach. The Board believes that one of those suggested revisions would provide added clarity, and has revised the opening paragraph of section 3.3.2 of the DSC accordingly. The Board also confirms that the concept of "renewable enabling improvement" applies only in relation to investments made to connect renewable energy generation facilities. Other investment categories would apply in relation to these types of investment if made to connect a load facility or a non-renewable energy generation facility. For example, upgrading to higher rated protective equipment in response to a request for connection by a load customer would be considered an expansion (unless it was a "connection asset").

Different stakeholders also suggested the following other revisions to the descriptions of the terms "expansion" and "renewable enabling improvement", which the Board believes will also contribute to greater clarity and has also adopted:

- revising paragraph (b) of section 3.3.2 to refer more specifically to voltage regulating "transformer controls or station controls" rather than to voltage regulating "equipment"; and
- revising paragraph (g) of section 3.2.30 to refer more specifically to a "voltage regulating transformer or station" rather than to a "regulating station transformer".

One stakeholder commented that limiting the application of section 3.2.30 (the illustrative list of what constitutes an "expansion") to renewable energy generation facilities creates uncertainty regarding whether the listed items would be considered "expansions" in relation to the connection of a load or a non-renewable energy generation facility. The Board sees no reason why these examples should not apply equally to all customers, and has revised the definition of "expansion" and section 3.2.30 of the DSC accordingly.

This same stakeholder also commented that it is not clear whether the definitions of "enhancement" and "expansion" are mutually exclusive, and proposed that the Board clarify the matter by specifying that a modification to the main distribution system is an expansion if the connecting customer could not connect without the modification. As indicated in the September Notice, the concept of "enhancements" better lends itself to system investments that are planned and effected to address matters relating to loads. Enhancements are investments that, while perhaps triggered by or resulting from a connection request, are distribution system improvements that will benefit system users more broadly. The Board acknowledges that there may be potential for some overlap between "enhancements" and "expansions", but in light of the above and of the cost responsibility rules that will apply to each of these categories of investment under the Final Amendments the Board does not believe that this potential for overlap is likely to give rise to material problems as a matter of practice. The Board also notes that these concepts have been included in the DSC for some time, and do not appear to have given rise to significant practical concerns. The Board therefore does not believe that it is necessary to propose further amendments to the DSC to address this issue.

Some distributors reiterated an earlier comment to the effect that, where a generator requests that an investment be made to provide a higher than normal level of reliability (such as a second circuit or auto transfer capability), the cost of that investment should be borne by the generator. The DSC does not specifically address the level of reliability to be provided to any particular class or type of customer, and where a customer wishes to obtain a level of reliability higher than the standard normally provided by the distributor the matter is typically negotiated by the parties as part of the connection process. The cost responsibility provisions of the DSC therefore relate more specifically to the costs associated with a level of reliability that is offered as the "standard" by a distributor. Subject to any mandatory reliability requirements that may be applicable at any given time, the Board expects distributors to act reasonably in terms of the "standard" level of reliability to be provided to customers. Beyond that, if a customer for its own commercial or other reasons requires a higher level of reliability in circumstances where the provision of that higher level would avail only to the customer's benefit, the customer should bear the incremental cost of that higher level. As such, the Board confirms that, in the case of a renewable generator, those incremental costs would not be included as part of the generator's renewable energy expansion cost cap.

B. Cost Responsibility for Transformer Stations

Some stakeholders commented on the issue of cost responsibility for transformer stations, noting among other things that a transformer can be owned by either a distributor or a transmitter and that the definitions or descriptions of the terms “expansion” and “renewable enabling improvement” do not refer specifically to transformer stations. Certain of these stakeholders noted that cost responsibility should not be dependent on who owns the transformer station. One of these stakeholders expressed concern regarding the cost responsibility treatment of transformer stations under the September Proposed Amendments and the cost responsibility treatment of transformer stations under proposed amendments to the Transmission System Code that were the subject of a separate Board initiative (EB-2008-0003). Specifically, this stakeholder noted that, where a generator requires a transformer station to connect its facility, the generator may opt to connect to a distribution system by reason of the cost responsibility treatment that is proposed for expansions and renewable enabling improvements under the DSC. This stakeholder commented that, as such, the decision on whether a transmitter or a distributor should build a new transformer station to enable the connection of generation may be influenced by the generator’s particular economic considerations rather than broader system efficiency.

At the present time, all transformer stations owned by a distributor have been deemed by the Board to be distribution assets. As such, they form part of the distributor’s rate base, and the Board confirms that they are therefore part of the distributor’s main distribution system for the purposes of the DSC. As a result, cost responsibility for such a transformer station would be determined in the same manner as for all other modifications or additions to the main distribution system of the distributor to whose system the renewable generation facility is connecting. Were it to be the case that a transformer station owned by a distributor was not deemed to be a distribution asset (in other words, the transformer station is a transmission asset), then the station would not form part of the main distribution system of the distributor to whose system the renewable generation facility is connecting. In such a case, cost responsibility for the transformer station would be the same as for upstream costs; namely, the cost of the transformer station would be passed through to and borne by the generator.

The Board recognizes that its approach to cost responsibility under the DSC results in a treatment of transformer station costs that varies depending on the classification of the transformer station, and will be mindful of this implication when it considers future

applications where the classification of a distributor-owned transformer station is involved. The Board also recognizes that its approach to cost responsibility under each of the TSC and the DSC may create incentives for a renewable generator to connect at the distribution level rather than the transmission level. However, the Board expects that transmitters and host distributors will be mindful of the implications of renewable generation connections that are anticipated to occur to the systems of their embedded distributors, and will plan their own systems accordingly. Over time, this can be expected to mitigate the risk associated with the different cost responsibility regimes under the Board's two Codes. The Board also notes that the risk of inefficient outcomes will be mitigated in many cases by the fact that renewable generation projects are often location dependent, lacking the siting flexibility required for choosing between a transmission connection and a distribution connection, and by the fact that most transformer stations are owned by transmitters. The Board therefore does not believe that it is necessary at this time to take further steps in relation to the concerns identified by stakeholders regarding cost responsibility for transformer stations.

C. Estimates vs. Final Costs

Some stakeholders representing generators expressed concern about the potential for the escalation of expansion costs between the initial estimates provided by an electricity distributor and the final actual costs, and recommended that this risk should be mitigated. One such stakeholder suggested that a renewable generator proponent seeking a connection have the ability to request an alternative bid when the estimated total cost of the expansion is within 10% of the proponent's renewable energy expansion cost cap. Another such stakeholder suggested that estimates for expansions should be binding on distributors and that, if actual costs exceed the estimate, then the distributor should bear full cost responsibility for the excess.

The Board notes that section 6 of the DSC makes provision for most generators to obtain, at their own cost, a detailed cost estimate for a proposed connection. The Board expects that such detailed cost estimates will be prepared by distributors diligently and with as much accuracy as the available information will allow. Should the Board become aware that distributors are consistently and materially under-estimating the total costs of connection for renewable energy generation facilities, the Board will address the matter as warranted at that time.

D. Administration of Rebates

Some stakeholders provided comments relating to the administration of rebates. One stakeholder commented that the September Proposed Amendments do not describe how rebates would be collected from generators to whom the renewable energy expansion cost cap does not apply, also noting that in its view all connecting customers should be treated the same with respect to cost responsibility for shared capacity. Other stakeholders expressed concerns about other features of the existing rebate mechanism (e.g., time limits on rebate eligibility and the consideration of factors such as relative load level and relative line length). The rebate mechanisms for unforecasted customers have been part of the DSC (section 3.2.27) for some time, and the September Proposed Amendments did not propose to alter the determination or administration of rebates payable to initial load and non-renewable generator customers. Further, the Board believes that section 3.2.27(b) of the DSC currently provides the necessary flexibility to enable distributors to determine the amount of a rebate based on criteria that is appropriate to the circumstances (e.g., the distributor may consider relative load level, line length, or both, depending on whether the customer is a load or a generator). Therefore, the Board does not believe that any further revisions to the DSC are required in relation to these matters.

E. *Transition for Cost Responsibility Approach to Enhancements*

Stakeholders representing distributors expressed concerns regarding the timing of the application of the September Proposed Amendments relating to enhancement costs. They noted that some distributors have already filed their 2010 cost of service applications, based in part on the application of the methodology for determining cost responsibility set out in the DSC at the time of filing. However, these stakeholders noted that the rates for those distributors will be set after these amendments come into force. Therefore, these stakeholders suggested that the amendments regarding cost responsibility for enhancements should not apply to a distributor until the distributor's rates have been set based on a cost of service application for the first time following the 2010 rate year. This suggestion is in keeping with the Board's intention, and the Board has revised section 3.3.4 and paragraph (d.1) of section B.1 of Appendix B of the DSC accordingly.

IV. Deferral of Consideration of Proposed Amendments to the DSC Regarding Eligibility for Rebates

In the September Proposed Amendments, the Board proposed that no rebate be payable to a renewable generator whose connection costs were determined on the basis of the proposed new cost responsibility rules (i.e., whose expansion costs were determined based on the application of a renewable energy expansion cost cap) if and when an unforecasted customer connects to the renewable generator's expansion. Some stakeholders recommended that the Board reconsider that proposal. One of these stakeholders noted that the Board's proposed approach could result in some generators delaying their connections in order to connect to expansions already paid for by earlier connecting renewable generators.

The Board has considered the comments received in relation to this issue, and believes that the issue warrants further examination. The Board will consider if an unforecasted customer connecting to an expansion should pay a rebate to an initial renewable generator to whom a renewable energy expansion cost cap applied. The Board will also consider if, in the case where ratepayers bore some or all of the costs on the initial expansion, a rebate should be paid to the benefit of the ratepayers.

It is important that the Board move forward with implementation of the Final Amendments without further delay. The Board has therefore determined that it will commence, in the near term, a separate notice and comment process to address the rebate issue discussed in this section. To ensure a more seamless and equitable transition, the Board will propose, as part of that notice and comment process, that any amendments to the DSC that are proposed in relation to the rebate issue come into force on the same date as the Final Amendments (in other words, that they be effective as of today's date).

In the interim, the Board has deleted section 3.2.27B of the DSC as proposed in the September Proposed Amendments. The Board has, also in the interim, left section 3.2.27A as proposed in the September Proposed Amendments (in other words, without a specific reference to an initial contributor that is a renewable generator to whom a renewable energy expansion cost cap applied). The Board recognizes that section 3.2.27A may need to be revised depending on the Board's proposal for addressing the rebate issue. The Board anticipates that its further notice and comment process will be completed before the rebate issue becomes a practical concern (in other words, before

any unforecasted customer connects to an expansion constructed initially for a renewable generator to whom a renewable energy expansion cost cap applies).

V. Anticipated Costs and Benefits

The anticipated costs and benefits of the June Proposed Amendments and the September Proposed Amendments were set out in the June Notice and the September Notice, respectively, and interested parties should refer to those Notices for further information in that regard. The Board believes that the Final Amendments will facilitate the achievement of the Government's policy goals regarding the connection of renewable generation, while protecting the interests of consumers by preserving incentives for generators to connect in areas where connection costs are lower.

The Board believes that the revisions to the September Proposed Amendments that the Board has adopted, as described in section III above, will provide greater clarity in relation to the application of the Board's revised approach to cost responsibility for renewable generation connections. The Board does not believe that additional material incremental costs will be triggered as a result of the adoption of those revisions.

VI. Coming Into Force

The Final Amendments to the DSC, as set out in Attachment A to this Notice, come into force today, being the date on which they are published on the Board's website after having been made by the Board.

As stated in the June Notice and the September Notice, with respect to distribution system investments related to the connection of renewable generation facilities that are intended to be covered by the Final Amendments, the Board confirms that the Final Amendments apply only to investments associated with renewable generation projects for which an application to connect was made on, or after, today's date. The date of application means the date on which the generator files with a distributor the necessary materials to formally request a connection to the distribution system as described in the applicable portion of Appendix F of the DSC ("Process and Technical Requirements for Connecting Embedded Generation Facilities"), which describes the different steps in the connection process for different sizes of generation facility. As set out in Appendix F of the DSC, in applicable cases the application to connect would include a request for a connection impact assessment.

One stakeholder requested confirmation about the application of the Final Amendments in circumstances where a renewable generator rescinds or withdraws an earlier application to connect and reapplies for connection after the date of coming into force of the Final Amendments. The Board confirms that the Final Amendments would apply to such a renewable generator, provided that the renewable generator files the application materials required by the DSC and has rescinded any earlier connection impact assessments and forfeited any earlier capacity allocations.

This Notice, including the Final Amendments to the DSC set out in Attachment A, will be available for public inspection on the Board's website at www.oeb.gov.on.ca and at the office of the Board during normal business hours.

Any questions relating to the Final Amendments to the DSC set out in Attachment A should be directed to the Market Operations Hotline at market.operations@oeb.gov.on.ca or 416-440-7604. The Board's toll free number is 1-888-632-6273.

DATED at Toronto, October 21, 2009.

ONTARIO ENERGY BOARD

Yours truly,

Original signed by

Kirsten Walli
Board Secretary

Attachs:

Attachment A: Final Amendments to the Distribution System Code

Attachment B: Comparison Version of the Final Amendments to the Distribution System Code Relative to the Distribution System Code Prior to the Adoption of the Final Amendments (for information purposes only)

Attachment A

Final Amendments to the Distribution System Code

Note: The text of the proposed amendments is set out in *italics* below, for ease of identification only. The revisions to the September Proposed Amendments adopted by the Board as part of the Final Amendments are stricken through or underlined (as the case may be) below, also for ease of identification only.

1. Section 1.2 of the Distribution System Code is amended as follows:

- (a) by deleting the definition of “enhancement” and replacing it with the following:

“enhancement” means a modification to the main distribution system that is made to improve system operating characteristics such as reliability or power quality or to relieve system capacity constraints resulting, for example, from general load growth, but does not include a renewable enabling improvement;

- (b) by deleting the definition of “expansion” and replacing it with the following:

“expansion” means a modification or addition to the main distribution system in response to one or more requests for one or more additional customer connections that otherwise could not be made, for example, by increasing the length of the main distribution system, ~~but in respect of a renewable energy generation facility excludes a renewable enabling improvement,~~ and includes the modifications or additions to the main distribution system identified in section 3.2.30 but in respect of a renewable energy generation facility excludes a renewable enabling improvement;

and

- (c) by adding the following immediately after the definition of “Regulations”:

“renewable enabling improvement” means a modification or addition to the main distribution system identified in section 3.3.2 that is made to enable the main distribution system to accommodate generation from renewable energy generation facilities;

“renewable energy expansion cost cap” means, in relation to a renewable energy generation facility, the dollar amount determined by multiplying the

total name-plate rated capacity of the renewable energy generation facility referred to in section 6.2.9(a) (in MW) by \$90,000, reduced where applicable in accordance with section 3.2.27A;

"renewable energy generation facility" has the meaning given to it in the Act;

"renewable energy source" has the meaning given to it in the Act;

2. Section 3.2 of the Distribution System Code is amended by adding the following immediately after section 3.2.5:

3.2.5A Notwithstanding section 3.2.5 but subject to section 3.2.5B, a distributor shall not charge a generator to construct an expansion to connect a renewable energy generation facility:

- (a) if the expansion is in a Board-approved plan filed with the Board by the distributor pursuant to the deemed condition of the distributor's licence referred to in paragraph 2 of subsection 70(2.1) of the Act, or is otherwise approved or mandated by the Board; or*
- (b) in any other case, for any costs of the expansion that are at or below the renewable energy generation facility's renewable energy expansion cost cap.*

For greater clarity, the distributor shall bear all costs of constructing an expansion referred to in (a) and, in the case of (b), shall bear all costs of constructing the expansion that are at or below the renewable energy generation facility's renewable energy expansion cost cap.

3.2.5B Where an expansion is undertaken in response to a request for the connection of more than one renewable energy generation facility, a distributor shall not charge any of the requesting generators to construct the expansion:

- (a) if the expansion is in a Board-approved plan filed with the Board by the distributor pursuant to the deemed condition of the distributor's licence referred to in paragraph 2 of subsection 70(2.1) of the Act, or is otherwise approved or mandated by the Board; or*
- (b) in any other case, for any costs of the expansion that are at or below the amount that results from adding the total name-plate rated capacity of each renewable energy generation facility referred to in section 6.2.9(a) (in MW) and then multiplying that number by \$90,000.*

For greater clarity, the distributor shall bear all costs of constructing an expansion referred to in (a) and, in the case of (b), shall bear all costs of constructing the expansion that are at or below the number that results from the calculation referred to in (b).

3.2.5C Where, in accordance with the calculation referred to in section 3.2.5B(b), a capital contribution is payable by the requesting generators, the distributor shall apportion the amount of the capital contribution among the requesting generators on a pro-rata basis based on the total name-plate rated capacity of the renewable energy generation facility referred to in section 6.2.9(a) (in MW).

3. Section 3.2 of the Distribution System Code is amended by adding the following immediately after section 3.2.27:

3.2.27A Notwithstanding section 3.2.27, when the unforecasted customer is a renewable energy generation facility to which section 3.2.5A or 3.2.5B applies and the customer entitled to a rebate under section 3.2.27 is a load customer or a generation customer to which neither section 3.2.5A nor 3.2.5B applies, the initial contributors shall be entitled to a rebate from the distributor in an amount determined in accordance with section 3.2.27. The distributor shall reduce the connecting renewable energy generation facility's renewable energy expansion cost cap by an amount equal to the rebate. If the amount of the rebate exceeds the connecting renewable energy generation facility's renewable energy expansion cost cap, the distributor shall also collect the difference from the connecting renewable energy generation customer.

~~*3.2.27B Notwithstanding section 3.2.27, where the initial contributor was a renewable energy generation facility to which section 3.2.5A or 3.2.5B applies, the renewable energy generation customer shall not be entitled to any rebate from the distributor in the event of the connection of any unforecasted customer(s).*~~

4. Section 3.2 of the Distribution System Code is amended by adding the following immediately after section 3.2.29:

~~*3.2.30 In the case of a generator customer connecting a renewable energy generation facility, an*~~ An expansion of the main distribution system includes:

(a) building a new line to serve the connecting customer ~~renewable energy generation facility~~;

(b) rebuilding a single-phase line to three-phase to serve the connecting customer ~~renewable energy generation facility~~;

- (c) rebuilding an existing line with a larger size conductor to serve the connecting customer ~~renewable energy generation facility~~;
- (d) rebuilding or overbuilding an existing line to provide an additional circuit to serve the connecting customer ~~renewable energy generation facility~~;
- (e) converting a lower voltage line to operate at higher voltage;
- (f) replacing a transformer to a larger MVA size;
- (g) upgrading a voltage regulating ~~station~~ transformer or station to a larger MVA size; and
- (h) adding or upgrading capacitor banks to accommodate the connection of the connecting customer ~~renewable energy generation facility~~.

5. Section 3.3 of the Distribution System Code is amended by adding the following immediately after section 3.3.1:

3.3.2 *Renewable enabling improvements to the main distribution system to accommodate the connection of renewable energy generation facilities are limited to the following:*

- (a) modifications to, or the addition of, electrical protection equipment;
- (b) modifications to, or the addition of, voltage regulating ~~equipment~~ transformer controls or station controls;
- (c) the provision of protection against islanding (transfer trip or equivalent);
- (d) bidirectional reclosers;
- (e) tap-changer controls or relays;
- (f) replacing breaker protection relays;
- (g) Supervisory Control and Data Acquisition system design, construction and connection;
- (h) any other modifications or additions to allow for and accommodate 2-way electrical flows or reverse flows; and
- (i) communication systems to facilitate the connection of renewable energy generation facilities.

3.3.3 *Subject to section 3.3.4, the distributor shall bear the cost of constructing an enhancement or making a renewable enabling improvement, and therefore shall not charge:*

- (a) a customer a capital contribution to construct an enhancement; or*
- (b) a customer that is connecting a renewable energy generation facility a capital contribution to make a renewable enabling improvement.*

3.3.4 *Section 3.3.3(a) shall not apply to a distributor until the distributor's rates are set based on a cost of service application for the first time ~~after this section comes into force~~ following the 2010 rate year.*

6. Section B.1 of Appendix B of the Distribution System Code is amended by adding the following immediately after paragraph (d) under the heading "Capital Costs":

- (d.1) paragraph (d) shall cease to apply to a distributor as of the date on which the distributor's rates are set based on a cost of service application for the first time ~~after this section comes into force~~ following the 2010 rate year.*

Attachment B

**Comparison Version of the Final Amendments to the Distribution System Code
Relative to the Distribution System Code Prior to Adoption of the Final
Amendments**

(for information purposes only)

(See attached document)