

Attachment D
to
Notice of Final Amendments to the
Transmission System Code and the Distribution System Code

December 18, 2018

EB-2016-0003

Comparison Version of Final Amendments
relative to the current Distribution System Code

Note: This attachment consolidates all three sets of amendments relative to the current Distribution System Code, with yellow shading indicating the initial revisions to the original September Proposed Amendments and grey shading indicating the final revisions set out in this Notice. Underlined text indicates additions and strikethrough text indicates deletions. Numbered titles are included for convenience of reference only.

The definition of “customer” in the Distribution System Code is amended as follows:

1 GENERAL AND ADMINISTRATIVE PROVISIONS

1.2 Definitions

“customer” means a ~~person that has contracted for or intends to contract for connection of a building or an embedded generation facility~~ generator, or consumer or embedded distributor whose facilities are connected to or are intended to be connected to a distributor’s distribution system. This includes developers of residential or commercial sub-divisions. For the purposes of section 3 of this Code (except section 3.3), an embedded distributor is deemed to be a customer;

The definitions of “embedded distributor” and “host distributor” in the Distribution System Code are amended as follows:

“embedded distributor” means a distributor ~~who is not a wholesale market participant~~ and that is provided electricity by a host distributor;

“host distributor” means ~~a the~~ distributor who provides electricity to an embedded distributor;

The definition of “distributor-owned asset” is added to the Distribution System Code as follows:

“distributor-owned asset” means an asset owned by a distributor other than an asset installed as part of a basic connection;

Section 1.7 of the DSC is amended by adding the following paragraph at the end of the section:

The amendments to sections 3.2.20, 3.2.21, 3.2.23 and 3.2.24 made by the Board on December 18, 2018 come into force on March 18, 2019.

Section 3 of the Distribution System Code is amended as follows:

3 CONNECTIONS AND EXPANSIONS

3.0 For the purposes of section 3 of this Code (except section 3.3), an embedded distributor is deemed to be a customer.

3.1 Connections

3.1.5 For non-residential customers other than micro-embedded generation facility customers, a distributor ~~may shall 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.

3.1.17 Where a distributor-owned asset has reached its end-of-life and is planned to be retired and replacement is determined to be the optimal solution, the distributor shall undertake an assessment, in consultation with the applicable customer(s), to determine the appropriate capacity of the replacement asset. Where the asset is a distribution station that is connected to the transmission system or a distribution line that connects a load customer with a non-coincident peak demand that is equal to or greater than 5 MW, that

assessment shall be undertaken in consultation with the applicable customer(s). Where the asset is replaced, the distributor shall either:

- (a) not recover a capital contribution from a customer to replace that asset, where the new asset is the same capacity or lower capacity; or
- (b) recover a capital contribution from a customer to replace the asset, where the customer requires additional capacity. The capital contribution shall be limited to the incremental cost relative to the cost of a like-for-like replacement asset.

3.1.17A Where a distributor-owned asset has not reached its end-of-life and is replaced at the request of a customer, the distributor shall recover a capital contribution from the customer. The capital contribution shall be equal to the remaining net book value of the replaced asset plus the advancement cost.

3.1.18 A distributor shall not connect to the distribution system of another distributor for the purpose of obtaining additional transmission connection capacity without the approval of the Board. The two distributors shall file a joint application for approval of the arrangement between them, any investment in distribution assets, and the compensation to be provided by the connecting distributor to the other distributor ("the facilitating distributor"), with the Board and include as part of the application:

- (a) confirmation by the IESO that the proposed distribution investment would avoid a higher cost investment in a transmission connection facility and would be the optimal infrastructure solution from a regional planning perspective;
- (b) a copy of the agreement between the connecting distributor and the facilitating distributor; and
- (c) evidence that there is sufficient capacity on the transmission connection facility that connects the facilitating distributor to the transmission network to meet the forecast needs of both distributors (i.e., a transmission connection investment will not be required during the forecast period), by providing the amount of excess capacity on the transmission connection facility and a load forecast from each distributor.

The agreement between the connecting distributor and the facilitating distributor shall ensure the customers of the facilitating distributor will not be negatively affected in any way due to the connection to the facilitating distributor's distribution system. In that regard, the agreement shall specify:

- (a) the capital contribution that the connecting distributor will provide to the facilitating distributor to compensate it for all the costs incurred to facilitate the distribution investment that connects it, taking into account any capital contribution refund that may be required under section 6.3.17 of the Transmission System Code;
- (b) any additional charges incurred by the facilitating distributor, due to the incremental load withdrawn from the transmission system by the connecting distributor, shall be recovered from the connecting distributor;
- (c) any other costs that may be identified by the two distributors, for the purpose of cost recovery from the connecting distributor, including any investment required in existing distribution assets of the facilitating distributor; and
- (d) the frequency by which the connecting distributor will provide an updated load forecast to the facilitating distributor.

For the purpose of this section, the connecting distributor shall be considered a customer of facilitating distributor under section 3.1.

3.1.19 For a new or modified distributor-owned asset that will serve a mix of load customers and generator customers, a distributor shall attribute the cost to the customers on a pro-rata basis, based on the apportioned benefit, taking into account factors including the respective rated peak output of each generation facility and the respective non-coincident incremental peak load requirements of each load customer, and the relative line length in proportion to the line length being shared by the customers.

3.1.210 Where a customer requests the relocation of a distributor-owned asset, the distributor shall recover from that customer the cost of relocating that assetconnection facility, except to the extent recovery is limited under law.

3.1.211 Where a distributor-owned asset is relocated in the absence of a customer request, the distributor shall bear the cost of relocating that asset.

3.2 Expansions

3.2.4 The capital contribution that a distributor ~~may~~ shall charge an embedded distributor or a customer other than a generator ~~or distributor~~ to construct an expansion shall ~~not exceed~~ be equal to 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.

The new section of the Distribution System Code initially numbered section 3.2.4A in the September Proposed Amendments has been renumbered as section 3.6.1.

~~3.2.4A Where a distributor has been required to provide a capital contribution to a transmitter under the Transmission System Code for the purpose of modifying a new or modified transmitter-owned connection facility, and the new or modified transmitter-owned connection facility modification also meets the needs of an embedded distributor and/or a load customer with a non-coincident peak demand that is equal to or greater than 35 MW, the distributor shall require a capital contribution from all beneficiaries that contributed to the need for the new or modified transmitter-owned connection facility modification based on their respective incremental capacity requirements and the total project cost. The distributor shall request that the transmitter, who owns the connection facility, calculate the capital contribution amount for each beneficiary using the methodology and inputs described in Appendix 5 of the Transmission System Code.~~

3.2.5 The capital contribution that a distributor shall ~~may~~ charge a generator to construct an expansion to connect a generation facility to the distributor's distribution system shall ~~not exceed~~ be equal to 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.

3.2.20 For expansions that require a capital contribution, a distributor ~~may~~ shall 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~~ The 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.

3.2.23 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 five-year customer connection horizon ~~15 years (if the customer's non-coincident peak demand meets or exceeds 3 MW) or five years (if the customer's demand is lower than 3 MW)~~ as defined in Appendix B. If at the end of the applicable 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 ~~shall~~ may retain at least ~~up to~~ ten percent of the expansion deposit for a warranty period for at least

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 five-year customer connection horizon ~~— 15 years (if the customer's non-coincident peak demand meets or exceeds 3 MW) or five years (if the customer's demand is lower than 3 MW) 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.

3.2.27 Unforecasted customers that connect to the distribution system during the

five-year customer connection horizon ~~— 15 years (if the customer's non-coincident peak demand meets or exceeds 3 MW) or five years (if the customer's demand is lower than 3 MW) — 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 five years ~~15 years for a large load customer (i.e., a customer whose non-coincident peak demand meets or exceeds 3 MW) and five years for a customer whose non-coincident peak demand is below 3 MW 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 generator customers ~~parties~~, the relative non-coincident peak demand ~~load level~~ of the load customers ~~parties~~ and the relative line length in proportion to the line length being shared by ~~both the~~ customers ~~parties~~, as applicable.

Section 3.4 is revoked (to reflect new sections 3.1.10 and 3.1.11 of the Distribution System Code which replace it):

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.~~

The following new sections 3.5 and 3.6 are added to the Distribution System Code, after the former section 3.4:

3.5 Bypass Compensation

3.5.1 A distributor shall require bypass compensation from a customer with a non-coincident peak demand that meets or exceeds 5 MW, if:

- (a) the customer disconnects its load facility from the distributor's distribution system and subsequently connects that facility to a generation facility or to another load facility that is not owned by the distributor the facilities of any customer such that the distributor will no longer receive rate revenues in relation to that disconnected facility both the load facility and a generation facility are connected to the distributor's distribution system on that customer's side of the connection point; and
or
- (b) the customer, while retaining its connection to the distributor's distribution system, also connects its load facility to a generation facility or to another load facility that is not owned by the distributor such that the customer reduces its load served directly by the distributor's distribution system, and the distributor's rate revenues in relation to that

facility will be reduced. ~~the distributor will no longer receive rate revenues in relation to that distribution asset.~~

The distributor shall calculate bypass compensation using the methodology set out in section 3.5.3.

3.5.2 A distributor shall not require bypass compensation from any customer:

- (a) when a load customer provides its own facility to serve new load or transfers new load to the facility of another person;
- (b) for any reduction in a customer's existing load served by the distributor's distribution system that the customer has demonstrated to the reasonable satisfaction of the distributor (such as by means of an energy study or audit) has resulted from embedded renewable generation, energy conservation, energy efficiency or load management activities; or
- (c) where a distributor-owned asset has been overloaded, and a customer transfers the overload to its own facility or to the facility of another person.

3.5.3 For the purposes of section 3.5.1, the distributor shall calculate bypass compensation by first multiplying the net book value of the bypassed distributor-owned asset (including a salvage credit and reasonable removal and environmental remediation costs, if applicable) by the bypassed capacity on the relevant distributor-owned asset. The distributor shall then divide the resulting figure by the maximum amount of load that can be supplied by the bypassed distributor-owned asset. For the purposes of this calculation, the bypassed capacity on the relevant distributor-owned asset shall be equal to the difference between the customer's existing load on that distributor-owned asset at the time of bypass and the ~~customer's~~ highest rolling three-month average of the customer's ~~monthly~~ non-coincident peak demand ~~load~~ in the ~~three~~ twelve-month period following the date on which bypass occurred.

3.6 Upstream Transmission Connections

~~3.2.4A~~ 3.6.1 Where a distributor has been required to provide a capital contribution to a transmitter under the Transmission System Code for the purpose of ~~modifying a~~ new or modified transmitter-owned connection facility, and the new or modified transmitter-owned connection facility modification also meets the needs of an embedded distributor and/or a load customer with a non-coincident peak demand that is equal to or greater than 35 MW, the distributor shall require a capital contribution from all beneficiaries that contributed to the need for the new or modified transmitter-owned connection facility modification based on their respective incremental capacity requirements and the total project cost. The distributor shall request that the transmitter, who owns the connection facility, calculate the capital contribution amount for each beneficiary using the methodology and inputs described in Appendix 5 of the Transmission System Code.

Section 9.7.1 of the Distribution System Code is amended as follows:¹

9.7 Reporting Requirements for Embedded Distributors

9.7.1 For each calendar month, beginning in 2016, an embedded distributor ~~that~~ who is not a wholesale market participant, shall provide its host distributor, no later than the second business day of the following month, with the following information:

- (a) for each OESP rate class, the total number of the embedded distributor's customers that received OESP rate assistance; and
- (b) for each OESP rate class, the total amount of rate assistance received by the embedded distributor's customers.

¹ As part of the OEB's [Customer Service Rules Review consultation \(EB-2017-0183\)](#), the OEB is proposing to delete section 9.7.1 of the DSC.