



BULLETIN

DATE ISSUED: September 29, 2022

**To: All Licensed Electricity Transmitters
Independent Electricity System Operator (IESO)
All Licensed Electricity Distributors
All Licensed Generators**

Re: Allocation of Network Upgrade Costs related to Customer Connections to the Transmission System

This Bulletin clarifies the circumstances under which regulated electricity transmitters should allocate costs associated with network facility upgrades to a generator or load customer connecting to the transmission system. It updates and supersedes Compliance Bulletin 200606, issued September 11, 2006.

This OEB staff Bulletin is an update to a staff bulletin that was issued on September 11, 2006; however, the general guidance provided in Bulletin 200606 has not changed. It has been updated to reflect changes to the Transmission System Code (TSC) since 2006. The updating of Bulletin 200606 was recommended by the OEB's Regional Planning Process Advisory Group (RPPAG).¹

Section 6.3 of the TSC addresses cost responsibility associated with new and modified *connection facilities*² and *network facilities* differently. Costs associated with additions or upgrades to *connection facilities* are allocated to the connecting customer since they are dedicated to one or a small group of customers.³ On the other hand, costs associated with additions or upgrades to *network facilities* are typically allocated to all ratepayers since they form part of a transmission system that is shared by all users.

¹ [RPPAG Report to the OEB](#), December 20, 2021.

² Italicized terms in this Bulletin are defined in the TSC.

³ Under a provision (section 6.3.18) that was added to the TSC in December 2018 (EB-2016-0003), where the transmitter demonstrates in an application to the OEB that the *connection facility* investment also provides benefits to the network (e.g., reliability), some costs are allocated to all ratepayers through the network pool. This OEB staff Bulletin does not apply to section 6.3.18 because the new or modified *connection* contemplated by section 6.3.18 does not involve any investments in a *network facility*.

However, section 6.3.5 of the TSC contemplates that some assets in a *network facility* may serve a *connection* function and, in such cases, the TSC refers to it as “exceptional circumstances”. The cost responsibility principles of the TSC (i.e., beneficiary pay, cost causality) require that a customer be allocated the full cost that is caused by their new or modified connection to the transmission system. Connecting customers should therefore be responsible for costs that are directly related to the customer’s new or modified connection to the transmission system; in OEB staff’s view, that includes where the assets that are necessary to connect the customer are located within the transmitter’s *network facilities*. OEB staff is of the view that those upgraded or added *network* assets form the “minimum connection requirements” associated with a new or modified customer connection, since those assets perform a *connection* function.

OEB staff also notes that, in some cases, for practical or economic reasons, all or some of the minimum connection requirement may be physically located away from the actual point of connection between the customer’s *connection facility* and the *network facility*. For example, where a customer connects to a *network facility* and a breaker is required to mitigate reduced reliability resulting from the new connection, it may be more cost effective to install that additional breaker at an upstream station rather than at the point of connection to the *network facility*. In such cases, the additional required breaker should be considered part of the minimum connection requirement even though it is not physically located at the actual point of connection to the *network facility*.

There may be cases where modifications to *network facilities* result in an apportionment of the cost between the connecting customer and all ratepayers to reflect that not all the network modifications caused by a customer connection form part of the minimum connection requirement. For example, if a customer connection is made to a *network station*, it will often require two terminating breakers (in a ring-bus arrangement), rather than a single radially connected breaker terminating on a station bus. In such circumstances, OEB staff is of the view that one breaker should form part of the minimum connection requirement because it primarily benefits the connecting customer and the related cost should therefore be allocated to the that customer, while the second breaker benefits all ratepayers and its cost should therefore be allocated to the network pool and recovered from all ratepayers. Below is a list of common examples where network modifications are caused by a customer connection and form part of the minimum connection requirement.

Section 6.1.2 of the TSC requires that transmitters ensure that new or modified connections to its transmission system do not materially reduce the reliability or performance of its transmission system. This is a necessary consideration in determining the minimum connection requirements, which generally consist of the following:

- a) Connection interface equipment including:
 - terminating structures;
 - disconnect switches; and
 - line or bus connections which may include line taps or bus extensions, if required.
- b) Automatic interrupting devices (e.g., breakers or circuit switchers and the associated structures and disconnect switches), as required by the IESO or the transmitter, that are located at the connection interface (or alternate upstream location, as discussed above).
- c) Protection and control (and associated telecommunication) directly related to the minimum connection requirement interrupting devices, and/or the connecting customer's interrupting devices.
- d) Incremental additions to existing special protection systems, such as load or generation rejection, required to incorporate the connecting customer.

OEB staff is therefore of the view that transmitters should allocate costs associated with upgraded or added *network* assets that form all or part of the minimum connection requirements to the connecting customer, where applicable. The list above is intended to cover most cases, but it is not necessarily exhaustive.

For other potential scenarios that may arise as the transmission system evolves, OEB staff is of the view that transmitters should be guided by the following: the connecting customer should be required to pay for the investment in the *network facility* where they are the sole or primary beneficiary and/or the investment is required to mitigate other customers being negatively impacted (e.g., reduced reliability) as a result of the connecting customer's new or modified *connection* to the transmission system. In staff's view, this guidance aligns with the underlying intent of the minimum connection requirements.

The views expressed in this Bulletin are those of OEB staff and are not binding on a panel of Commissioners. Any enquiries regarding this Bulletin should be directed to the OEB's Industry Relations email address at industryrelations@oeb.ca.