



# Gross Load Billing

January 11, 2024



# Agenda

1. Introduction to Gross Load Billing
2. Examples of Gross Load Billing Scenarios
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# Introduction to Gross Load Billing

# Gross Load Billing - Distribution



- Why Gross Load Billing?
  - Hydro One built assets to meet customer's maximum demand, GLB recovers those costs
  - Ensures customers without load displacement generation are not subsidizing the costs for maintaining these assets for those customers that have load displacement generation
  - Follows **Uniform Transmission Rates (UTR)** application of GLB
- GLB is triggered where:
  - The generator connected to an existing load meets or exceeds:
    - **2 MW** for renewable resources
    - **1 MW** for non-renewable resources
- Applies to:
  - **Sub Transmission Rate Class**
    - Local Distribution Companies (LDCs)
    - Large Distribution Accounts
    - Applies to Distribution Volumetric (Common ST), RTSR Line & Transformation
  - **General Service Demand Rate Class**
    - Applies to RTSR Line & Transformation charges, only – does not apply to Distribution Volumetric

See Appendix Slide 1 for notes pertaining to GLB on Hydro One Distribution Rate Order

# Gross Load Billing - Distribution

## Gross Load Billing (GLB)

- GLB does not apply to the distribution volumetric charge General Service Demand customers with load displacement generation. The following is a breakdown of rate class eligibility and Delivery Line items where GLB is applied.

	<b>Sub Transmission</b>	<b>General Service Demand</b>
<b>Rate Class Eligibility</b>	>500 kW Demand Connected to 13.8kV or greater Local Distribution Companies	<500 kW >500kW, but connected to less than 13.8 kV
<b>Distribution Volumetric</b>	GLB	Net
<b>Network Service (RTSR)</b>	Net	Net
<b>Line Connection (RTSR)</b>	GLB	GLB
<b>Transformation (RTSR)</b>	GLB	GLB

- A separate, revenue-grade, meter must be installed to measure generator output
  - Load meter and Generation meter are totalized so that applicable charges will be billed at gross instead of net of generation

# Examples of Gross Load Billing Scenarios

# Gross Load Billing – Example - Distribution



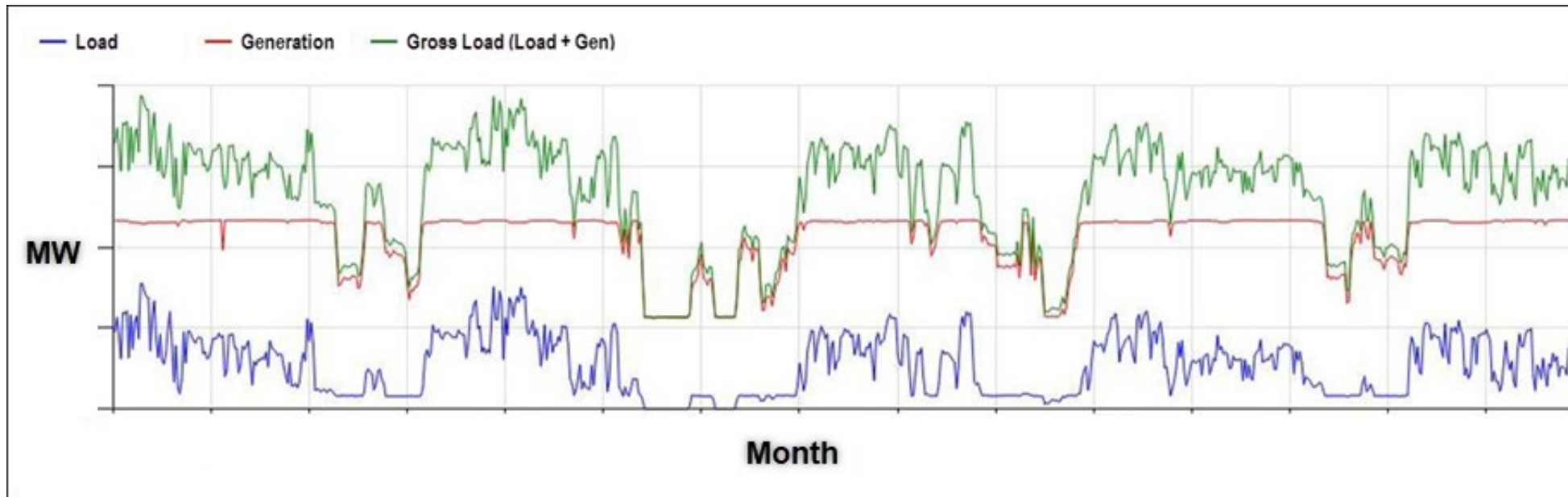
A new 3 MW Hydraulic Generator comes to service behind a 10 MW Hydro One Distribution-Connected customer on Sub Transmission Rate Class.

- Before the generator connected, the customer pays 10 MW for Network, Transformation and Line Connection Charges, as well as Common ST (volumetric) charge.
- After the generator connected, the customer pays 7 MW Network, but continues to pay 10 MW Transformation and Line Connection charges
  - Continues to pay 10 MW for Common ST (distribution volumetric) charge to Hydro One.

# Gross Load Billing – Example - Distribution

Actual 2MW Customer with 1.2 MW Generation:

- **Load Meter** (net of generation) will be used for RTSR Network Service Peak, Commodity, Global Adjustment (including Class A coincident peak evaluation & eligibility)
  - General Service Demand (or non-Sub Transmission), applies also to Distribution Volumetric charge.
  - Peak ~ 800kW
  - kWh ~65% less on Net vs Load
- **Gross Load** (Load Meter + Generation Meter) will be used for RTSR Line & Transformation Connection
  - For Sub Transmission Customers – Gross Load will be used for Common ST (distribution volumetric)
  - Peak ~2,000kW





# Appendix

# Gross Load Billing - Distribution

## Gross Load Billing (GLB)

- Since January 1, 2013, the following has been stated in the OEB-approved Hydro One Networks Inc. Rate Order:

The monthly billing determinant for the **RTSR Line and Transformation Connection Service** rates:

- a. For energy-only metered customers: the customer's metered energy consumption adjusted by the total loss factor as approved by the Ontario Energy Board.
- b. For all demand billed customers: the non-coincident peak demand in the billing period. The rates shown are to be adjusted by the total loss factor as approved by the Ontario Energy Board.
- c. *For customers with load displacement generation above 1 MW, or 2 MW for renewable generation, installed after October 1998, RTSR connection is billed at the gross demand level*

*For customers with load displacement generation at 1MW or above, or 2MW or above for renewable generation, installed after October 1998, the **ST volumetric charges** are billed at the gross demand level*

- Sub Transmission Rate Class, only.

# Former Orillia Power Distribution – Standby



- Standby Charges apply to Hydro One customers within the former Orillia Power Distribution Rate Zone

## STANDBY POWER SERVICE CLASSIFICATION

This classification applies to an account with load displacement facilities that contracts with the distributor to provide emergency standby power when its load displacement facilities are not in operation. The level of billing demand will be agreed to by the distributor and the customer, based on detailed manufacturer information/documentation such as nameplate rating of the load displacement facility. Further servicing details are available in the distributor's Conditions of Service.

## APPLICATION

The application of these rates and charges shall be in accordance with the Licence of the Distributor and any Code or Order of the Ontario Energy Board, and amendments thereto as approved by the Ontario Energy Board, which may be applicable to the administration of this schedule.

No rates and charges for the distribution of electricity and charges to meet the costs of any work or service done or furnished for the purpose of the distribution of electricity shall be made except as permitted by this schedule, unless required by the Distributor's Licence or a Code or Order of the Ontario Energy Board, and amendments thereto as approved by the Ontario Energy Board, or as specified herein.

Unless specifically noted, this schedule does not contain any charges for the electricity commodity, be it under the Regulated Price Plan, a contract with a retailer or the wholesale market price, as applicable.

It should be noted that this schedule does not list any charges, assessments, or credits that are required by law to be invoiced by a distributor and that are not subject to Ontario Energy Board approval, such as the Global Adjustment and the HST.

## MONTHLY RATES AND CHARGES - Delivery Component - APPROVED ON AN INTERIM BASIS

Distribution Volumetric Rate - \$/kW of contracted amount	\$/kW	1.0713
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# Gross Load Billing - Transmission

## Gross Load Billing (GLB)

- The OEB-approved Universal Transmission Rate Schedule authorizes Gross Load Billing of Transmission Line and Transformation Connection Charges
  - **EMBEDDED GENERATION** The Transmission Customers shall ensure conformance of Registered Wholesale Meters in accordance with Chapter 6 of Market Rules, including Metering Registry obligations, with respect to metering installations for embedded generation that is located behind the metering installation that measures the net demand taken from the transmission system if (a) the required approvals for such generation are obtained after October 30, 1998; and (b) the generator unit rating is 2 MW or higher for renewable generation and 1 MW or higher for nonrenewable generation ; and (c) the Transmission Delivery Point through which the generator is connected to the transmission system attracts Line or Transformation Connection Service charges. These terms and conditions also apply to the incremental capacity associated with any refurbishments approved after October 30, 1998, to a generator unit that was connected through an eligible Transmission Delivery Point on or prior to October 30, 1998 and the approved incremental capacity is 2 MW or higher for renewable generation and 1 MW or higher for non-renewable generation. The term renewable generation refers to a facility that generates electricity from the following sources: wind, solar, Biomass, Bio-oil, Bio-gas, landfill gas, or water. Accordingly, the distributors that are Transmission Customers shall ensure that connection agreements between them and the generators, load customers, and embedded distributors connected to their distribution system have provisions requiring the Transmission Customer to satisfy the requirements for Registered Wholesale Meters and Metering Registry for such embedded generation even if the subject embedded generator(s) do not participate in the IESO administered energy markets.

# Gross Load Billing – Example - Transmission



A new 3 MW Hydraulic Generator comes to service behind a 10 MW Transmission Customer Connected at a Hydro One Transformer station.

- Before the generator connected, the TX customer pays 10 MW for Network, Transformation and Line Connection Charges.
- After the generator connected, the TX customer pays 7 MW Network, but continues to pay 10 MW Transformation and Line Connection charges.

# Gross Load Billing – Example – Transmission to Distribution



A new 3 MW Hydraulic Generator comes to service behind a 10 MW Hydro One Distribution's embedded LDC connected at a Hydro One Network Transformer station.

Hydro One Distribution Settlement with the IESO:

- Before the generator connected, H1D pays 10 MW for Network, Transformation and Line Connection Charges to the IESO
- After the generator connected, H1D pays 7 MW Network, but continues to pay 10 MW Transformation and Line Connection charges to the IESO

**Embedded LDC Settlement with Hydro One Distribution:**

- Before the generator connected, the Embedded LDC pays 10 MW for Network, Transformation and Line Connection charges, as well as Common ST (Volumetric) charge to Hydro One.
- After the generator connected, the Embedded LDC pays 7 MW Network, but continues to pay 10 MW for Transformation and Line Connection charges
  - Continues to pay 10 MW Common ST (distribution volumetric) charge to Hydro One.

