

Calculation Approach for Distributors

The following summarizes Hydro One's approach when applying the TSC sections 6.5.8 and 6.5.10. The calculation approach was developed in accordance with the General Principles.

Transmission System Code Sections 6.5.8:

When carrying out a true-up calculation for a distributor, a transmitter:

- (a) shall add to the actual load the amount of any embedded generation (determined in accordance with section 11.1) that was installed during the true-up period; and
- (b) shall not reduce the updated load forecast as a result of any embedded generation (determined in accordance with section 11.1) that was installed during the true-up period.

Application of Section 6.5.8 (a):

- **Calculation:**

Study Area DG savings = Average Monthly Peak Generation (MW)

- Qualifying DG (as defined under TSC section 6.5.7) that coincides with monthly non-coincidental peak load of the CCRA Study Area will be used to determine the impact on the incremental load during the True-Up period.
- Qualifying DG installed during the True-Up period may be forecast for a period not to exceed the length of the OPA contract.

- **Validated Inputs:**

- DG meter readings for each month of the CCRA True-Up period coinciding with the CCRA monthly peak load.

For DG without interval meter reading, Validation documentation, i.e. study or audit is required. **Note:**

- One study approach for DG without interval meters is to extrapolate the CCRA monthly peak based on the generation profile of similar interval metered DG.
- If third party studies or audits for DG without interval meter readings (e.g. Microfit) are not available, an internal study certified by an officer of the company will be accepted

Transmission System Code Section 6.5.10

When carrying out a true-up calculation for any load customer, a transmitter:

- (a) shall add to the actual load the amount of any reduction in the customer's load that the customer has demonstrated to the reasonable satisfaction of the transmitter (such as by means of an energy study or audit) has resulted from energy conservation, energy efficiency, load management or renewable energy activities that occurred during the true-up period; and
- (b) shall not reduce the updated load forecast as a result of any reduction in the customer's load that the customer has demonstrated to the reasonable satisfaction of the transmitter (such as by means of an energy study or audit) has resulted from energy conservation, energy efficiency, load management or renewable energy activities that occurred during the true-up period.

Application of Section 6.5.10 (a) for Distributors:

**1. Distributor OPA CDM Programs (Peak Saver/Demand Response/ Energy Savings)
(including similar Distributor CDM programs)**

- **Calculation:**

Step One:

$$\text{Study Area OPA CDM Savings (MW)} = (\text{CDM Programs' results}) \times (\text{applicable time frame}) \times \frac{\text{Study Area Peak Load}}{\text{LDC Peak Load}}$$

Step Two:

$$\text{Incremental Study Area OPA CDM Savings} = \text{Study Area OPA CDM Savings (MW)} - \text{Study Area OPA CDM Savings (MW) at In-Service}$$

Notes:

- CDM programs results: OPA reported annual peak load (MW) savings for LDC.
- Applicable time frame: CDM Program results attributable to Peak Saver & Demand Response programs applied to 5 out of 12 months of the year; Energy Savings programs are applied to 12 months of the year.
- CDM program results allocated to study area using Study Area Peak Load (MW)/LDC Peak Load (MW) (non-coincident to transmission system peak).
Note: If it can be demonstrated to Hydro One's reasonable satisfaction what degree the CDM program results apply to a study area, the specific allocation will be substituted for this general allocation assumption.
- Persistency of the OPA Energy Efficiency CDM based on OPA reporting when available, otherwise provincial averages will be applied to extend OPA reported data.

CDM/DG Load Adjustments Guidelines for CCRA True-Ups (Approach for Distributors)

- **Validated Inputs:**
 - **OPA Programs**
 - OPA verified reports (first available in 2006).
 - Draft or quarterly OPA reports will be accepted if final report is unavailable. At subsequent true ups, if applicable, the draft CDM value will be confirmed with the final OPA report and reflected in the subsequent true up. Detailed third party verified documentation, i.e. study or audit.
 - **Similar Distributor CDM Programs**
 - Detailed third party verified documentation, i.e. study or audit.
 - Pre 2006 Programs: CDM programs results, i.e. Incremental Peak Demand Savings summary as per Lost Revenue Adjustment Mechanism (LRAM) or Rate Application submissions for programs not supported by OPA.

2. Residential Time of Use Metering (TOU)

- a) If a validated customer specific Time of Use Study is available, it will be used to derive savings % applicable to the CCRA study area.
- b) In the absence of a customer specific Time of Use Study, the OPA TOU provincial savings % will be applied.

- **Calculation:**

Step One:

$$\text{Time of Use Savings (MW)} = \text{Study Area Peak Load} \times \text{TOU\%}$$

Step Two:

$$\text{Incremental TOU Savings} = \text{Time of Use Savings (MW)} - \text{Time of Use Savings (MW) at In-Service}$$

Notes:

- Actual TOU % as reported on an annual basis within the True-Up period.
 - Forecasted TOU % will be based on the most recent historical value.
 - TOU is considered to have occurred with the initiation of TOU based billing.
 - If a phased TOU implementation occurs over a period which includes the in-service date, the TOU savings for the entire implementation may be prorated based on the percentage implemented as of the in-service date.
- **Validated Inputs:**
 - Customer specific third party validated

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- OPA verified TOU study. If only draft OPA study is available, during a subsequent true up, if applicable, the draft CDM value will be confirmed with the final OPA report and reflected in the subsequent true up

Note: OPA currently studying TOU reduction factors for five LDC's (Hydro One's distribution business, Toronto Hydro, Ottawa Hydro, Thunder Bay Hydro and Newmarket Hydro). Report is expected to be finalized and issued in 2015.

3. IESO Industrial Conservation Initiative (ICI) Program

- **Calculation:**

Study Area ICI savings = Average Monthly ICI Peak Savings (MW)

- Qualifying ICI participants - customers that joined the ICI program during the True-Up period.

- **Validated Inputs:**

- Detailed third party verified documentation, i.e. study or audit.

4. IESO Dispatchable Load (DL) Savings

- **Calculation:**

Study Area DL savings = Average Monthly DL Peak Savings (MW)

- Qualifying DL participants - customers that began participation in a DL program during the True-Up period.

- **Validated Inputs:**

Detailed third party verified documentation, i.e. study or audit.

Glossary of Terms

CDM: energy conservation, energy efficiency and load management activities

DL: IESO dispatchable load customer

Active participants in Ontario's electricity market who can adjust the amount of energy they consume in response to direct instructions from the IESO.

DG: embedded generation (determined in accordance with TSC section 11.1) or embedded renewable generation.

TSC section 11.1:

11.1.1 A transmitter shall, for all purposes, treat any generation facility that came into service on or before June 8, 2004 as embedded generation in relation to a load, provided that the generation facility was always connected on the customer side of the connection point. This requirement applies regardless of ownership of the generation facility, the voltage at which the generation facility is connected, the location of the generation facility, the size or number of units of generation capacity, or any relationship between the owner of the generation facility and the customer or the load.

11.1.2 A transmitter shall, for all purposes, treat any new generation facility that comes into service after June 8, 2004 as embedded generation in relation to a load, provided that the generation facility is connected on the customer side of the connection point at the time the generation facility comes into service. This requirement applies regardless of ownership of the generation facility, the voltage at which the generation facility is connected, the location of the generation facility, the size or number of units of generation capacity, or any relationship between the owner of the generation facility and the customer or the load.

11.1.3 If at any time after a generation facility comes into service it is reconfigured so as to become connected on the customer side of the point where a load facility is connected to a transmitter's transmission facilities, the transmitter shall not for any purpose treat that generation facility as embedded generation in relation to that load.

11.1.4 If at any time after a generation facility that is connected to a transmitter's transmission system comes into service a load customer disconnects its facilities from the transmitter's transmission facilities and subsequently connects its facilities, or a load facility becomes connected:

- (a) directly to the generation facility; or
- (b) to the facilities of any person such that both the load facility and the generation facility are connected to the transmitter's transmission facilities on that person's side of the connection point, the transmitter shall not for any purpose treat that generation facility as embedded generation in relation to that load facility.

11.1.5 The reference to "for all purposes" and "for any purpose" in sections 11.1.1 to 11.1.4 includes the purpose of determining whether bypass compensation is required to be paid by the load customer and the purpose of determining the manner in which network charges will be applied.

CDM/DG Load Adjustments Guidelines for CCRA True-Ups (Approach for Distributors)

ICI: IESO Industrial Conservation Initiative

Participants reduce their electricity costs by lowering their electricity consumption during peak periods. The participants are charged Global Adjustment on the basis of their share of the total system demand during the highest five peak hours of the year.

TOU: residential time of use metering

Time-of-use pricing is a rate structure that reflects the costs associated with electricity production throughout the day. Prices rise and fall over the course of the day and tend to drop overnight and on weekends.

True-up period: period between the In-Service Date and the current True-Up Point.

True-Up Point: means the points prescribed in TSC Subsection 6.5.2(c) for low risk connections.

TSC: Transmission System Code originally issued by the OEB on July 14, 2000 as last revised on August 26, 2013.