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OPA DR3 Implementation

Revenue Metering Standing Committee
Date: 02 October 2008



DR 3 Fundamentals

- The DR 3 program is a contractual load shedding product.

- DR3 Program Rules and Contract posted on OPA website: http://www.powerauthority.on.ca/

- Program is open to Direct Participants and OPA Approved Aggregators who can provide reduction of 5 MW and 25 MW respectively.

DR 3 Fundamentals

- Participants sign up for curtailments of either 100 or 200 hours/year.
- Contracts run for 1, 3, or 5 years
- The OPA pays participants:
  - An availability payment for all hours the participant agrees to make their load available for curtailment, and
  - A utilization payment for hours the participants actually curtail their load.
- The IESO activates participants.

DR 3 Fundamentals

Hour of Availability:

- Winter:
  - December 1 to March 31
    - availability window from 16:00 to 21:00
- Summer:
  - June 1 to September 30
    - availability window from 12:00 to 21:00
- Shoulder months:
  - April, May, October and November
    - availability window from 16:00 to 21:00

Measurement & Verification Plans

- M&V Plans submitted to the IESO for review and recommendation to the OPA.
- New submission required when there is a material change in the plan.
- Each plan relates to a Settlement Account.
- 5 minute meter data using MC approved meters.
- Statistical methods, operational meters, SCADA and any other non-meter means are not acceptable.

Plan Details

- Plans must include detailed information:
  - Facilities
  - Load reduction strategy and MW
  - SLD where applicable
  - Declaration of transferability
  - Metering installation – complete information
  - Confirmation of 5 minute interval
  - Historical metering data – one year for Aggregators and two years for Direct Participants.

Proposed Baseline Methodology (1)

- Load Baselines:
  - Calculated baseline is required for an activation
  - Business days only
  - Baseline value for any Confirmed Hour of an Activation event, shall be the average of the same clock hour as those of the Activation event for the highest fifteen (15) suitable business days of the last twenty (20) suitable business days prior to the Activation.
  - Excludes shutdown days
  - A max of 35 business days prior to the Activation will be used to establish the twenty (20) suitable business days.

Proposed Baseline Methodology (2)

- For Aggregated loads, the baseline methodology is the same, except the baseline values shall include all contributors as one single stream of metering data.

- For generators behind the meter, the baseline value for any Confirmed Hour of an Activation event, shall be the average of the same clock hour as those of the Activation event for the lowest fifteen (15) suitable business days of the last twenty (20) suitable business days prior to the Activation.

Baseline Adjustments

- Baselines shall be adjusted using the measured demand prior to the curtailment hour.
  - Baseline adjustments shall only be used to increase the baseline values.
  - The baseline shall be adjusted as follows:
    - Determine the average of the measured four (4) hours prior to the curtailment hour (Avg4).
    - Determine the difference (Diff) between Avg4 and the calculated unadjusted baseline (Bsl1) (i.e. Diff = Avg4 – Bsl1). If Diff is a negative value or equal to zero, there shall be no adjustment.
    - Add 80% of this difference (Diff) to the unadjusted baseline (Bsl1) for each curtailment hour of the activation event (e.g. HE 14 = Bsl14 + 80% of Diff).

Settlement

- The M&V Plans are mapped in MVStar.
- All meters are mapped to a summary meter for channels 1 & 2 (or equivalent) with an effective date.
- IESO issues SRR's for signature by participant.
- The summary meters are mapped to the DR3 settlement account.
- Each settlement account require a distinct M&V Plan.

IESO Implementation

- IESO settling registered DR3 participants as of August 01, 2008
- 85 MW of demand reduction available from registered DR3 participants as of October 1st, 2008