

Comments to:
Independent Electricity System Operator
(IESO)

- Stakeholder Engagement for Demand Response Working Group on September 30, 2016

Submission by
City of Toronto

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Update on Target Capacity and Commitment Period

Stakeholder Feedback (Slide 8)

IESO: *"The IESO has received stakeholder feedback supporting the current Commitment Period design for reasons including: 1. Shorter Commitment Periods provide more opportunity to institute rule changes especially in DRA's early years 2. Longer periods increase business risk and would decrease participation. 5. Longer Periods may be a barrier for new participants"*

Comment: The City provided feedback to the IESO that was included and responded to on Page 3 from the DRWG Meeting 3 that was intended to recommend that the IESO consider the value of longer term contracts. <http://www.ieso.ca/Documents/consult/drwg/DRWG-20160915-IESO-Response.pdf>

Recommendation: The City of Toronto supports longer commitment periods and recommends that the IESO evaluate the benefits associated with longer commitment periods. Shorter periods result in excess risk for Demand Response investments and has limited the City's capacity for investment for DR enablement.

Residential DR

General Question – Does the IESO plan on utilizing the existing installed Peaksaver units in coordination with new Residential DR? Has the IESO evaluated the curtailment affect from a customer participating in Residential DR and Peaksaver to ensure that no double counting will occur?

Recommendation: The City recommends that the IESO confirm that participants submitting loads for Residential DR are not intending to curtail the same HVAC and Pool Pump loads that are activated during a Peaksaver event.

Determining Control Group Size (Slide 12)

IESO *"Distinct characteristics of residential customers must be considered (weather sensitivity, meter data, small contributors, and dynamic populations)"*

Recommendation: The City recommends that the IESO consider the different zones and variable weather when identifying the appropriate size for a Control Group.

Measuring Performance using RCT (Slide 13-16)

IESO *"To evaluate how much DR was delivered, we propose to compare the average control group load to the average treatment group load on the event day, with a same-day adjustment"*

IESO- *" Ideally, prior to activation, the control group's average load would perfectly align with the treatment group's average load, but there may be times where this is not the case"*

Question: Has the IESO evaluated the possibility that average loads may not perfectly align due to an aggressive pre cooling of the Treatment group?

Comment: In the event of an activation the IESO proposal for an in-day adjustment may incentivize participants to pre-cool facilities of the Treatment Group to achieve a higher in day adjustment.

For Example: (Example is for demonstrative purposes) An aggregator has been awarded 5 MW of Capacity in the DR Auction. On a **Peak day** the Treatment group consists of 5000 homeowners and consume 5 MW. The Control Group of 500 homeowners consumes 500 kW. (An average of 1 kW)

In the event of a DR advisory the aggregator may request that the Treatment Group aggressively pre cool *starting 4 hours before activation* resulting in increased consumption up to 10 MW (2 kW/ homeowner). The Control group continues to average 500 kW of consumption (1kW/homeowner). Based on the proposed adjusted baseline the control group will be provided an in-day adjustment of 2. (Avg: Treatment Group: 2kW/ Avg Control Group: 1kW= Adjustment Factor of 2)

Upon activation the Treatment group may be able curtail from the peak of **10MW down to the normal 5 MW** and meet their IESO DR obligation of 5 MW.

In this circumstance the in-day adjustment awards Treatment group a bonus for pre cooling and curtailing down to normal usage. This can be further demonstrated by analyzing the control group demonstrating that **without any notification** the Treatment group consumption would have **remained at 5 MW**.

Question: Would the IESO provide additional details on the rationale for a same day adjustment for the control group on the event day?

Recommendation: The City recommends that the IESO evaluate an alternative approach ensuring that the "*the control group's average load would align with the treatment group's average load*". This may include identifying an adjustment factor utilizing a random day of Peak Consumption.

Pre Curtailment. (Slide 16)

Comment: The City supports the proposal to consistent ruling for Residential and C&I Demand Response programming and to adjustments for pre curtailments "in the 3 hours starting 4 hours before activation."

Energy Market Participation (Slide 23)

IESO-"Energy market bids are based on available DR capacity for that hour – Bids based on capacity from treatment group"

Question: Has the IESO evaluated a method to verify available capacity for a Treatment Group on a day when individual contributors may be unavailable for curtailment.

For example: 5000 home owners have agreed to curtail AC when requested. This load will be weather sensitive and may be unavailable during cooler days. Will a participant be required to submit a reduced daily bid to reflect the actual availability?

Statement: Many C&I facilities are weather sensitive and have adjusted their Demand Response Capacity to meet the IESO Availability Requirements during days of reduced HVAC usage.

Recommendation: The City recommends that the IESO apply consistent Availability and Capacity Penalties for the Residential and C&I programs.