

Comments to:
Independent Electricity System Operator
(IESO)

Stakeholder Engagement for Demand Response
Working Group on January 30, 2018

Submission by

City of Toronto

February 20, 2018

UPDATE ON ADDING HDR RESOURCES TO THE EMERGENCY OPERATING STATE CONTROL ACTIONS (EOSCA) LIST

Recommendation: The City supports the proposed Market Manual changes and recommends closing this item

2018 DR Work Plan

IESO "DRWG 2018 Considerations *"ICA SE is the forum for DR stakeholders to discuss transition"* (Slide7)

Question: Would the IESO consider adding a priority item for comparing DR Auction to the proposed Incremental Capacity Auction (ICA) to highlight challenges for DR participation?

Recommendation The City supports the 2018 Working Group goals and recommends that efforts should be focus on developing alignment with the Market Renewal

Recommendation #2 The City recommends that the DR Working Group act provide regular feedback and lessons learned to the Stakeholder Engagement for the Incremental Capacity Auction.

Priority Items – New in 2018 (Slide 19, 21)

Clarification of "Quantify the true value of Demand Response to the system"

Recommendation: The City recommends that the Demand Response Working Group more effectively communicate the value and opportunity from DR resources including:

Capacity Savings

The IESO can identify the financial savings from procuring DR capacity vs traditional generation in the 2016-2018 years.

Utilization Savings

Assuming that the IESO activation of Contract Based Demand Response (CBDR) resources occurred when CBDR energy costs were lower than the next available resource, Ontario's electricity system realized a significant savings in hourly energy costs.

For Example:

- A) Ontario System Demand is 21,000 MW
- B) A DR resource submits a bid for 100 MW at \$200 / MWh
- c) Non - DR resource submits a bid of 200 MW at \$250/MW
- D) **Estimated savings could result in \$442,000 in energy costs. Looking at the results from a 4 hour DR activation savings could reach \$1.7 million dollars**

| | Provincial MW Demand | Energy Pricing MWh | Lamination MW | Cleared MW | Total Cost |
|----------------|----------------------|--------------------|---------------|------------|-------------|
| DR resource | 21,000 | \$200 | 100 | 21,000 | \$4,200,000 |
| No DR resource | 21,000 | \$220 | 200 | 21,100 | \$4,642,000 |
| Savings | | | | | \$442,000 |

***Due to limited energy market experience we request that the IESO confirm if are assumptions are correct

New webpage – A new web resource could demonstrate the value of DR and enhance familiarity with the program.

Priority Items – New in 2018 (Slide 20)

Comment: The City recognizes that the Incremental Capacity Auction (ICA) will evaluate the baseline at the detailed design stage and will provide comments when requested.

Comment: The current in-day adjustment (IDA) can create a challenge for our contributors with a variable and customer sensitive demand.

For example:

- A water distribution facility is contracted to deliver 5 MW of DR.
- The facility has a DR baseline of 10MW.
- 10 AM The plant experiences a reduction in water demand and reduces consumption to 8 MW
- 3 PM typical afternoon demand for water resumes increasing the facility's demand to 10 MW
- 3 PM the facility identifies an IDA adjusted baseline of 8 MW (8/10= .8 IDA)
- 4PM – Plant is scheduled to curtail 5 MW from the adjusted baseline of 8 MW (consumption shall not be above 3 MW).

This case would require the plant to deliver a curtailment of 7 MW

(Please confirm if we have correctly calculated the IDA)

Improving Utilization of HDR Resources

Review of Stakeholder Feedback (Slide 17)

IESO "Instituting a maximum energy bid for Hourly Demand Response (HDR) resources could lead to a greater utilization in the energy market at the expense of the overall market"

Question: Can the IESO provide further clarification on this response?

Would an increase economic HDR activations resulted in a cost or savings for the market?

The DR 2018 Priority Goal included "increased activations of HDR resources", it is our understanding that adding a bid cap would mimic a "Price trigger" resulting in increased activations during periods of peak demand.

Conclusions (Slide 30)

Comments: The results of the IESO analysis demonstrates that introducing changes including a price trigger for standby notices would increase the number of standby notices.

2017 DR AUCTION RESULTS –

2017 DR Auction – Prices (Slide5)

Comment The City recommends that the DR Working Group formally forward the DR Auction results to the IESO's Incremental Capacity Auction Team. The lessons learned from the DR demand curve and reference pricing demonstrate how new flexible contracted capacity can be procured at an economic cost.

IMPROVING UTILIZATION OF HDR RESOURCES

Reducing Consumer Costs

Scale for evaluating benefits.

Comment: The City recommends that the IESO develop an evaluation matrix for analyzing and comparing findings against the framework goals of the Incremental Capacity Auction and the objectives from the Demand Response Working Group Terms of Reference.

For example: How does the IESO value reducing consumer costs vs the "*cost of greater activations → putting downward pressure on prices*" (IESO Slide 12)

Arguments (Slide 12)

Response to arguments against utilization payments:

1) Wholesale Price Efficiency - Market v. Retail Price

The City agrees that loads on retail contracts have reduced exposure and are less incented to activate, however the City questions the argument of wholesale efficiency and the assumption that real time pricing signals from avoided energy costs will result in a material effect.

Recommendation: The City recommends that the IESO consider the lessons learned from the CBDR program. As demonstrated in the period 2015-2017 resources were prepared to activate at \$200 MWh provided they received a \$200/ MWh payment, demonstrating that revenue is a stronger incentive for increased activation.

For the purpose of this response we have identified a resource's economic dispatch value @ \$400 MWh (this is equivalent of the highly subscribed CBDR program \$200/MWh/Energy payment + \$200/MWh savings).

1) Assumed energy bids for resources paid a Utilization

Wholesale cost \approx $>$ 400/MWh

Net Benefit \$400/MWh

2) Assumed energy bids for resources Not Paid a Utilization

Wholesale Cost \approx $>$ 200 MWh

Net Benefit \$400 MWh

Running a model utilizing the IESO energy costs and considering the two proposed scenarios- option #2 would result in additional activations.

2) Disproportional Benefits (negawatt \neq megawatt)

Comment: The City questions the argument that DR resources did not incur a cost for producing the electricity. Several resources experience increased staffing costs associated with employee shift changes

Comment #2: As mentioned in the Navigant study "*FERC's final 745 ruling was based on the premise that negawatts and megawatts are functionally and economically equivalent*".

Recommendation: The City recommends that the IESO support the premise that that DR resources are providing a functionally and economically equivalent resource

Question: Can the IESO provide insight and clarification on how generators provide the hourly energy pricing? Are generator resources expected to bid at exactly the cost of operation without any profit?

3) Putting downward pressure on prices /Harm to Other Suppliers -- Against Payments may lead to greater activations \rightarrow putting downward pressure on prices \rightarrow negatively impacting other suppliers

Request: The City requests further clarification on this argument.

Comment: The City supports a view for affordable electricity pricing. If paying a DR resource for utilization reduces the cost of electricity then DR payments are a positive system benefit.

4) Harm to Economy

Recommendation: The City recommends evaluating the greater good, or the sum benefit of a Demand Response project. Meeting activation protocol generally has employee costs associated shifting loads and ensuring continued service delivery. However, when measured against program revenue, DR compensation allows the City to increase services to the community.

Comment: Introducing Utilization payments for activations may also deliver a positive economic impact as load resources will have new revenue to reinvest in the economy.