

FEBRUARY 12, 2021

Demand Response Working Group

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Purpose

- Provide an update on the revised hourly demand response (HDR) objective statement presented at the December 3, 2020 Demand Response Working Group (DRWG) meeting
- Provide a draft list of Demand Response (DR) market development priorities for discussion and stakeholder feedback
- Provide an update on next steps for DR-related discussions



HDR Objective Statement

Tom Aagaard, Supervisor, Demand Response Market Development

Background

- The IESO presented a draft objective statement for the HDR resource type at the October 8, 2020 DRWG meeting¹
- The IESO presented a revised HDR objective statement that sought to incorporate stakeholder feedback at the December 3, 2020 DRWG meeting
- In a document posted to the DRWG engagement webpage in January 2021, the IESO responded to additional stakeholder feedback submitted following the December 3, 2020 DRWG meeting

¹ Appendix includes draft HDR Objective Statement for reference

Stakeholder Feedback

- The Advanced Energy Management Alliance (AEMA) provided feedback that the revised HDR objective statement would still limit the possibilities and create barriers to the evolution of the HDR resource
- AEMA supports efforts to identify and remove barriers for DR resources to participate in all of the IESO-Administered Markets (IAMs) and programs, if they meet the technical requirements

Stakeholder Feedback (cont'd)

- Voltus Energy echoed AEMA's feedback and proposed specific amendments should IESO be committed to proceeding with establishing an HDR objective statement

IESO Response

- In response to stakeholder feedback and after further internal IESO discussion, the IESO will not proceed with establishing an HDR objective statement at this time
- The intent of developing the HDR objective statement was not to introduce barriers to the evolution of DR resources in Ontario, but rather to articulate how the IESO relies on HDR resources in order to inform the identification/assessment of market development activities
- The IESO is supportive of exploring opportunities to enhance the value of the HDR resource type, and demand side resources more broadly



Demand Response Market Development Priorities

Tom Aagaard, Supervisor, Demand Response Market Development

Context

- The IESO has developed a draft list of prioritized DR market development initiatives based on stakeholder feedback on materials presented at the December 3, 2020 DRWG, preceding DRWG meetings, internal discussions, and outreach to interested stakeholders
- The finalized list will guide the IESO's DR market development activities for further assessment and discussion in 2021
- See Next Steps section for more details on how to follow these discussions

Overview of Draft DR Market Development Priorities

Priority Initiative

- 1 Review the accuracy of the baseline methodology for Commercial & Industrial (C&I) Hourly Demand Response (HDR) resources
- 2 Explore opportunities to enhance operational and planning confidence in HDR resource performance
- 3 Explore near-term opportunities to unlock flexibility from DR resources that leverage smaller DERs
- 4 Explore the business case for enabling “in-house” residential HDR Measurement & Verification (M&V) leveraging Smart Metering Entity data
- 5 Assess the benefits of enabling market participants to register up to two virtual C&I HDR resources per zone

1. Review C&I HDR Baseline Methodology

- Review the effectiveness of the current 'High 15 of 20 with in-day adjustment' baseline methodology for C&I HDR resources at estimating load in absence of a DR event relative to alternative methodologies
- IESO would seek stakeholder input on study design elements, including which alternative baseline methodologies to explore and the evaluation metrics that baseline performance would be assessed against

1. Review C&I HDR Baseline Methodology (cont'd)

- Drivers:
 - Strong stakeholder interest
 - Ensuring assessment of resources participating in the IAMs is reflective of performance

2. Enhance Confidence in HDR Resource Performance

- A consultation with external stakeholders and internal IESO teams to identify opportunities to enhance confidence in the availability of HDR capacity and HDR performance when activated
- This may include outreach to market participants with particularly poor resource performance, reviewing test procedures, and other activities in coordination with planned Capacity Auction enhancements

2. Enhance Confidence in HDR Resource Performance

- Drivers:
 - A need to enhance operational and planning confidence in the resource type following issues during the July activations (e.g. significant volume of energy bid change requests within the mandatory window, variance in performance relative to historic test performance, highly variable performance within the fleet)

3. Unlock Flexibility From Smaller DR Resources

- Building on the IESO's Innovation Whitepaper series, the IESO's forthcoming DER roadmap will set out clear next steps towards enhancing DER participation in the IAMs
- In 2021, the IESO also expects to explore opportunities through pilot/demonstration programs to test the capabilities of and address barriers to enhanced DER participation
- Both of these initiatives will include a focus on unlocking flexibility from smaller DER-backed DR resources

3. Unlock Flexibility From Smaller DR Resources

- Drivers:
 - Strong stakeholder interest
 - Opportunity suggested by the DER Survey results

4. Explore Business Case for Enabling “In-house” M&V

- Develop business case for implementing internal IESO capability to perform Measurement & Verification of residential HDR resources leveraging data held by the Smart Metering Entity
- Stakeholder input would be required to confirm feasibility of a potential solution and to support estimating implementation benefits

4. Explore Business Case for Enabling “In-house” M&V

- Drivers:
 - Proliferation of smart thermostats and other smart home devices growing provincial residential DR potential
 - Access to meter data remains a major barrier to the participation of residential DR, a potential source of low cost capacity, in the Ontario wholesale market

5. Explore Enabling Multiple Virtual C&I HDR Resources

- This 2020 DRWG work plan initiative was paused in Q3 2020 due to perceived interdependencies with the baseline methodology review work plan item
- The IESO is open to further exploring the benefits associated with enabling market participants to register up to two virtual C&I HDR resources per IESO zone, pending prioritization against other IESO projects
- Drivers:
 - Stakeholder interest

Expectation setting

- With Market Renewal Program implementation underway and the Resource Adequacy framework under development with stakeholders, the IESO will have limited capacity in the early 2020s to implement additional projects while fulfilling its core planning, market and system operation functions
- Initiatives that require changes to IESO tools will be subject to the IESO's internal competitive project prioritization process



Stakeholder Feedback Requested and Next Steps

Stakeholder Feedback Requested

- Please provide any further feedback to inform setting the IESO's list of DR market development priorities, including:
 - Are there additional priority initiatives that should be captured?
 - Is the current ranking of priority initiatives appropriate?
 - Should any of the draft priority initiatives be revised or removed?

Submitting Stakeholder Feedback

- Please provide written feedback by March 8th to engagement@ieso.ca using the feedback form on the [engagement web page](#).
- Please use the feedback form provided to ensure stakeholder feedback is compliant with the Accessibility for Ontarians with Disabilities Act (AODA). If you choose not use the IESO feedback form, please provide an AODA compliant pdf document.

Next Steps

- The IESO will consider any additional feedback as articulated in today's discussion, as well as written feedback submitted after this meeting, in order to finalize the list of DR market development priorities
 - The finalized list of DR market development priorities and a summary of stakeholder feedback and IESO responses will be posted on the DRWG webpage
- Details on the IESO's approach to continue engagement with stakeholders on the DR market development priorities list will be communicated by end of Q1 2021

Next Steps (cont'd)

- More broadly, building upon the Expanding Participation in Operating Reserve and Energy (EPOR-E) initiative, the IESO is currently developing a work plan to enable emerging and evolving resource types in the IAMs
 - IESO intends to release its work plan at the end of Q1 regarding how it will enable greater resource participation in the markets. The IESO will present its initial prioritization of activities for input and discussion with Stakeholder Advisory Committee (SAC) members at the February 17 SAC meeting

Following Other DR-related Discussions and Activities

- Ongoing engagements:
 - [Innovation and Sector Evolution White Paper Series](#) (DER integration into wholesale market)
 - [Resource Adequacy](#) (development of framework of competitive acquisition mechanisms to reliably and cost-effectively meet needs)
 - Includes discussion of Capacity Auction enhancements
 - Other engagements can be found [here](#).



Appendix: Draft HDR Objective Statement

Draft HDR objective statement

The primary objective of the Hourly Demand Response resource type is to provide capacity to maintain reliability during times of localized or global system stress.

IESO is broadly supportive of exploring design changes that can enhance the value of the resource type, and demand side resources more broadly, for maintaining system reliability, such as increasing flexibility of utilization, or enhanced competition in the IESO-Administered Markets, including through the provision of additional services.

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Draft HDR objective statement (cont'd)

Consistent with expectations for other resources, the IESO expects the HDR resource type to be dependable in the planning timeframe (e.g. HDRs reliably make their full obligated capacity available in the energy market) and operational timeframe (e.g. energy market bids reliably reflect actual capacity available); and when activated, to comply with dispatch instructions for the duration of the activation.

Thank You

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