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Demand-Side Vision and DR Participation Model Enhancements

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Purpose

- Continue the conversation with demand-side participants on participation in IESO-administered markets and programs
- Create a forum to prioritize challenges and opportunities and collaboratively identify potential solutions
- Consider further opportunities to unlock incremental demand side participation

Agenda

- Background
- Demand-Side Vision
 - Proposed Vision Statement
 - Proposed Engagement Principles
- Demand-Side Community Discussions
 - Issues and Opportunities - Priority Areas
- Feedback and Next Steps



Background

Demand-Side Resources in Ontario

- Demand-Side resources have contributed to the reliability and cost-effectiveness of Ontario's power system for many years. Current participation models include:

Hourly Demand Response

Dispatchable Load

Storage and Hybrids

Industrial Conservation Initiative

Peak Perks Residential DR (Summer 2023)

Price Responsive Load (post-MRP)

Pilot Programs

Save on Energy Programs

Demand-Side Resources in Ontario

- Demand-Side resources are the pathway for consumers to participate in the reliable operation of Ontario's electricity grid
- Ontario is entering a period of growing system need
 - IESO's 2022 Annual Planning Outlook shows capacity needs emerging in 2026; energy needs also emerge and grow in the second half of the decade
- Greater potential for demand-side participation is emerging as new technologies and tools become available
- Proven demand-side resource value streams: cost-effectiveness, flexibility, diversity and non-emitting



Demand-Side Vision

Driver for Demand-Side Vision

- Recent discussions between stakeholders and the IESO have identified needs to review DR participation challenges and create a forum to develop potential solutions for enhanced participation models
 - Establishing a common Demand-Side Vision and Principles will help facilitate the dialogue and provide a framework to prioritize enhancement and change initiatives, as required
- This work is expected to complement existing IESO engagements (e.g. DER Market Vision and Design Project, Capacity Auction) as well as provide insights for new initiatives in the future

Related Engagements

- This engagement will work with demand-side participants to consider issues specific to their participation in IESO markets and programs
- Includes discussion on topics primarily related to demand-side participation in the energy market and IESO programs and how incremental participation can be unlocked
- The Capacity Auction (CA) Enhancements and DSV engagements will remain closely coordinated

Draft Vision Statement

To foster the optimal contribution of demand-side resources to a cost-effective, reliable power system while enabling consumers to manage their energy usage through the energy transition

Engagement Principles

- Engagement with the DR community will adhere to the IESO's Stakeholder Engagement principles; in particular:
- **Transparency** – the IESO should be clear about the services that are required and the expectations of performance, while demand side resources should be clear about their capabilities to respond; at the same time, rationale behind decision making should be clear
- **Openness** – to exploring multiple pathways to participation to reflect differing capabilities of different types of resources and different administrative requirements to reflect the risks associated with different levels of performance

Principles for Demand-Side Development Work

Proposed solutions are expected to follow these principles:

- **Equity** – different resources offering the same service to the system should have access to similar revenue opportunities which should be commensurate with the value delivered
- **Accountability** – the IESO is accountable for enabling the opportunities for demand-side participation in the planning and operation of the Ontario grid while demand-side resources will be accountable for delivering the reliability service they have promised

Principles for Demand-Side Development Work

- **Implementability** – the options and solutions proposed should evolve demand-side participation in a practical and feasible manner while recognizing broader ongoing activities/priorities
- **Cost effectiveness** – this work will enable solutions that are cost effective for Ontario ratepayers relative to other available options

Discussion Questions

- Does the proposed Demand-Side Vision statement capture the key considerations for Demand-Side participation?
- Do the proposed engagement principles align with the vision?



Demand-Side Community Discussions

Future Discussions

- The IESO will host technical sessions to review the Hourly Demand Response (HDR) resource participation model and consider potential future models starting in November
 - It is anticipated that changes to the current participation model that will be implementable within 12-24 months would be prioritized for action
 - It is also expected that longer term opportunities for future Demand-Side participation models may be identified through this process

Discussion Topics

- The IESO will engage with stakeholders to address existing concerns with DR performance, particularly as it relates to the utilization and measurement of the resource, agnostic to how the resource is acquired
- The IESO will also have open discussions to better understand how emerging technologies that enable greater load controllability could be incorporated into existing or future participation models to provide incremental capacity

Identified Priority Topics for consideration

Past Priority Areas	Status
Review measurement data requirements for virtual HDR	Active
Review baseline methodology accuracy and explore changes to the in-day adjustment factor	Baseline methodology study conducted in 2020/21
Establish cost/benefit of enabling registration of multiple virtual C&I HDR resources	Active
Explore Brattle Report's "broader recommendations"	For consideration
Energy Market Performance	Active
Price Responsive Load Participation (MRP)	Active

Discussion Questions

- Are the identified priority areas reflective of current participation issues and challenges?
- Are there additional topics the IESO should consider?



Feedback and Next Steps

Feedback and Next Steps

- Stakeholders are invited to provide written feedback on the topics discussed to engagement@ieso.ca by September 29, 2023
- Discussions will continue later this fall and there is an opportunity to identify your interest in participating through the feedback form
- An engagement plan is available on the Demand-Side Vision engagement webpage for additional information



Appendix

Recent Stakeholder Feedback

- A list of enhancements suggested by stakeholders during Capacity Auction discussions is attached for stakeholder review
- Future discussions on these stakeholder suggestions may take place within the Capacity Auction Enhancements and/or DSV engagement

Recent Stakeholder Feedback

Enhancement Suggestion

Review of audit parameters/process

Review of reference technology that is the basis of the Reference Price

Understanding how import and virtual zonal limits are determined

Consider reducing dispatch test to one per obligation period

Evaluate the benefits of enabling monthly buyouts

Review of 4-hour duration requirement for energy storage

Benefits of enabling a weather-sensitive resource class and/or moving to four seasonal obligation periods to more accurately value HVAC load contributions

Recent Stakeholder Feedback

Enhancement Suggestion

Provide more flexibility options for participants to manage/adjust commitments

Enable HDR participants to register more than one resource per zone

Additional review of in-day adjustment factor in baseline methodology

Reduce minimum resource requirement to less than 1 MW

Introduce performance-based incentives

Utilize resource-specific data to determine EFORd for storage resources

Include loss factors in UCAP methodology for demand response resources

Recent Stakeholder Feedback

Enhancement Suggestion

Various suggestions that increase scope of contributor management process

Review of HDR standby trigger process

Thank You

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