



Energy Payments for Economic Activation of Demand Response Resources Update

August 26, 2020

Meeting Participation

- Webinar participation (including audio):
 - [Web participation link](#)
 - Use the “Ask a Question” function to submit a question during the webinar
- Teleconference participation (audio only):
 - Local (+1) 416 764-8640; Toll Free (+1) 888 239-2037
 - Press *1 to alert the operator that you have a question
- When asking a question, please state your name and who you represent so those participating are aware
- This webinar is conducted according to the IESO [Engagement Principles](#)

Purpose

To provide responses to stakeholder feedback on the materials presented at the May 21st meeting.

Propose next steps for the Energy Payments for Economic Activation of Demand Response (DR) Resources engagement.

Agenda

- Recap of May stakeholder webinar
- Stakeholder feedback from May webinar and IESO responses
- Further consideration for Option 4 (2-Part Bids Reflected in Dispatch)
- Next steps

Re-cap: December Meeting

- At the May stakeholder webinar, the IESO:
 - Reviewed findings of the final Brattle Report Energy-Market Payment Options for Demand Response in Ontario,
 - Concluded discussion of energy payments for wholesale price-exposed DR resources informed by the report's main finding, and
 - Indicated openness for further discussion on the report's other recommendations through the Demand Response Working Group (DRWG).

Re-cap: December Meeting (continued)

- Reviewed stakeholders' response to IESO request for information to inform shut-down cost options development and evaluation.
- Further defined shut-down cost options identified at the February engagement meeting.
- Presented results of shut-down cost options screening exercise.

Recap: Summary and Status of Options

Option	Objective	Status
Option 1: Risk Mitigation Approach	Reduce the risk of the DR resource from incurring significant shut-down costs if activated more frequently than they have forecast	Option to be further considered
Option 2: Cost Recovery Approach	Allow for cost recovery of shut-down costs that are submitted by the participant and verified by the IESO	Option to be further considered
Option 3: Representative Cost	Administrative approach that would compensate DR with an amount representative of Ontario DR shut-down costs	Screened out due to lack of stakeholder data to inform representative cost
Option 4: 2-Part Bid Reflected in Dispatch	Incorporate shut-down cost into dispatch using a 2-part energy market bid and either a) include the shut-down cost in price formation, or b) provide a make-whole payment for unrecovered costs	Screened out due to barriers to implementation in near-term



STAKEHOLDER FEEDBACK

Stakeholder Feedback from May Webinar

- IESO received comments from four stakeholders following the May 21 webinar
 - Advanced Energy Management Alliance (AEMA)
 - Association of the Major Power Consumers in Ontario (AMPCO)
 - Electricity Distributors Association (EDA)
 - Market Surveillance Panel (MSP)
- This section summarizes and responds to stakeholder feedback on the shut-down cost options and general feedback on the Energy Payments engagement.

Stakeholder Feedback from May Webinar (continued)

- This section summarizes and responds to stakeholder feedback on the shut-down cost options and general feedback on the Energy Payments engagement.

Option 1: Risk Mitigation Approach

Stakeholder Feedback:

- AEMA and AMPCO do not support this option:
 - Limiting the number of activations would diminish the value of the capacity product provided by DR, particularly in the context of a technology-agnostic auction mechanism.
- EDA also noted this option could erode the value of DR, despite providing certainty to DR resources.

Option 1: Risk Mitigation Approach (continued)

Stakeholder Feedback:

- EDA requested that the IESO provide a methodology for determining the maximum number of activations and noted suggestions for the IESO to consider if this option was to be further explored.

IESO Response:

Based on this feedback, Option 1 will not be considered further.

Option 2: Cost Recovery Approach

Stakeholder Feedback:

- AMPCO does not support this option:
 - Due to commercial sensitivity, DR participants do not want to provide quantified shut-down cost information.
- AEMA noted this option would not be manageable for aggregators due to the complexity and cost associated with aggregating shutdown costs.

Option 2: Cost Recovery Approach (continued)

Stakeholder Feedback:

- EDA provided a number of considerations for the design of a cost recovery framework, including eligible costs and the audit and verification process.

IESO Response:

Based on this feedback, Option 2 will not be considered further.

Option 3: Representative Cost Approach

IESO Response:

- The rationale for a form of compensation of a test or emergency activation of Hourly Demand Response (HDR) resources because they are out-of-market activations.
- The HDR resource cannot avoid this cost through their energy market bids.

Option 3: Representative Cost Approach (continued)

IESO Response:

- Based on a cross-jurisdictional scan, the IESO has not been able to identify any other North American wholesale market which broadly provide administratively-set shut-down costs for economic DR activations.
- It is a more common approach that shut-down costs are submitted voluntarily as an energy bid parameter, subject to audit and verification by the system operator.

Option 3: Representative Cost Approach (...and continued)

- In absence of stakeholder data, the IESO does not have a transparent basis from which a representative shut-down cost for Ontario DR resources can be informed and will not consider Option 3 further.

Option 4: 2-part Bid Reflected in Dispatch

Stakeholder Feedback:

- AEMA and AMPCO do not agree Option 4a should be screened out.
- AEMA and AMPCO both noted this option should be included within the scope of the Market Renewal Program (MRP).
 - AMPCO noted that part of the driver for MRP has been the need to address long-standing issues in the Ontario market and energy payments for DR is one of those issues.

Option 4: 2-part Bid Reflected in Dispatch (continued)

Stakeholder Feedback:

- AMPCO also noted that the IESO has not provided information to support its claim; therefore, this option would be difficult to implement in the timeframes desired.
- AEMA indicated that costs submitted under Option 4a should not be subjected to audit, as inputs are commercially sensitive and subject to customer confidentiality.

Option 4: 2-part Bid Reflected in Dispatch (more on Stakeholder Feedback)

- AEMA also indicated that although Option 4a would be difficult to manage for aggregators, it would allow structuring of bids by participants to reduce risk during activations.
- EDA noted the IESO should consider when and how to explore 2-part bids.

Option 4: 2-part Bid Reflected in Dispatch (...and lastly)

IESO Response:

- In response to stakeholder feedback, IESO has undertaken further analysis on adding the implementation of Option 4a/b to the scope of MRP.
 - The next section of the presentation elaborates on:
 - tool changes,
 - capital expenditures, and
 - data submission requirements associated with implementing a 2-part bid mechanism for DR resources within the MRP timeframe.

General Feedback on Shut-down Costs

Stakeholder Feedback:

- MSP indicated the objective of providing shut-down costs is unclear, including:
 - whether shut-down costs will be considered in addition to, or instead of, possible future energy payments, and
 - how paying shut-down costs leads to improved efficiency and competitiveness of IESO-administered markets.

General Feedback on Shut-down Costs (continued)

IESO Response:

- The objective of the energy payments engagement was initially focused on exploring whether and how energy market payments for DR resource activation should apply in Ontario.
- During December 2019 OEB proceedings, stakeholders articulated a concern centered around shut-down cost recovery.
 - The OEB noted that an inability to recover shut-down costs could theoretically result in unjust discrimination against DR resources.

General Feedback on Shut-down Costs (...and continued)

IESO Response:

- In the event, it also represented a material, negative economic impact.
- Consequently, IESO expanded the scope of engagement to consider shut-down cost recovery instead of energy payments.
- Analysis of options to address the shut-down cost question considered MRP principles including efficiency and competition.

General Feedback on Energy Payments

Stakeholder Feedback:

- AEMA noted they do not support analysis performed and conclusions reached in the Brattle Report because the findings are based on current construct of the market and the Global Adjustment mechanism.
- EDA suggested that prior to finalizing this initiative, the IESO should analyze the impact of any proposed changes on competition and on the achievement of economically efficient outcomes.

General Feedback on Energy Payments (continued)

IESO Response:

- The IESO supports the Brattle Group discovering wholesale-exposed DR customers are already incented to curtail consumption when the wholesale electricity price exceeds their energy bid (willingness to pay).
- An energy payment is not economically efficient under these circumstances.

General Feedback on the Engagement

Stakeholder Feedback:

- MSP indicated the IESO has not provided an objective for the DR product and believes clearly stated objectives will bring this stakeholder engagement process:
 - in line with the MRP guiding principles, and
 - provide stakeholders with a firmer basis for assessing the options.

General Feedback on the Engagement (continued)

IESO Response:

- The objective for this engagement was to explore and address stakeholder concerns regarding energy payments for DR resources as a resource type.

General Feedback on the Engagement (...more on Engagement)

Stakeholder Feedback:

- MSP indicated it is unlikely that any objective of the expanded Energy Payments engagement could be fulfilled in the absence of stakeholder feedback informing the shut-down cost question, and a thorough study of the nature and magnitude of shut-down costs, the contribution DR might provide to grid reliability, and cost reduction compared to generation resources.

General Feedback on the Engagement (...and lastly)

IESO Response:

- The IESO agrees that in absence of evidence of the materiality issue and a benefits case, the IESO does not have a transparent basis to inform or justify a shut-down cost recovery framework for Ontario DR resources.



FURTHER CONSIDERATIONS OF OPTION 4 (2-part BID REFLECTED IN DISPATCH)

Option 4: Overview

- AEMA and AMPCO have indicated general support for Option 4, incorporating shut-down costs into dispatch using a 2-part energy market bid.
- Under this option, shut-down costs would either:
 - a) Be included in price formation and recovered through energy market revenues, or
 - b) Be recovered through a make-whole payment, if necessary, in the event of an activation.

Option 4: Overview (continued)

- Stakeholders proposed that this option be implemented within the suite of MRP tool changes.
- This section will present further information on IESO's determination that it is not practical to include Option 4 within the scope of MRP.

Option 4: Tool Impacts

- As part of MRP, IESO will enable three-part energy offers for Non-Quick Start (NQS) resources participating in the Real-time Generation Cost Guarantee (RT-GCG) program.
- IESO has leveraged experience with this project to identify the scope of required tool changes and estimated IT costs to implement 2-part bids for DR resources.

Option 4: Tool Impacts (continued)

- Implementing 2-part energy bids for DR resources would require >\$1.5M investment in updating multiple IT systems.
 - Please see Appendix A for description of each tool.

Option 4a: Additional Considerations

- As part of the MRP high-level design, the IESO did not explore the option to include NQS resource start-up costs (akin to DR resources shut-down costs) and speed-no-load costs in price formation.
- This option was excluded from consideration given the lack of such a feature, where costs incurred as a result of a multi-hour commitment are used to set price, in any other Locational Marginal Prices market.

Option 4a: Additional Considerations

- While other markets allow commitment costs to set price for “fast-start” resources (resources which start and complete their commitment within the hour), the need for including these type of costs in price formation was not identified as a priority at this time given a lack of such resources
- Given this context, it is unlikely Option 4a, whereby non-variable costs are included in price formation, would be implemented in Ontario.

Option 4b: Additional Considerations

- Many of the design considerations associated with Option 2 (Cost Recovery Approach) are also applicable to Option 4b including:
 - Need to establish eligible cost criteria.
 - Need to establish what savings and revenues would be included in calculation of make-whole payment.

Option 4b: Additional Considerations

- Need to establish requirements and process for submitting eligible costs to IESO for audit and verification to:
 - maintain integrity of market,
 - ensure fair treatment to other resources,
 - and align with MRP design principles of transparency and efficiency
- Addressing these design considerations would require significant investment of IESO labour and additional engagement with stakeholders on the program design.

OPTION 4: CONCLUSION

- Due to the significant impacts (both tool-related and otherwise) and timeline implications for implementation, IESO has determined that it is not feasible to expand the scope of MRP to include Option 4, enabling 2-part bids for DR resources.
- IESO remains open to discussing implementing Option 4b, involving an out-of-market payment, in the post-MRP timeframe through an appropriate forum outside of this Energy Payments engagement.

OPTION 4: CONCLUSION (continued)

- Implementation of any options would require stakeholders to provide quantitative evidence of the materiality of the issue and benefits to support business case development.



NEXT STEPS

CURRENT STATUS of ENGAGEMENT

- Stakeholder support for a shut-down cost recovery mechanism appears to be limited to one option that is only feasible post-MRP.
- Barriers to implementation of any option will persist if stakeholders are unable to provide shut-down cost data in the future to inform the development of a cost recovery framework and the benefits case.

NEXT STEPS

- IESO proposes to conclude the Energy Payments for Economic Activation of Demand Response Resources engagement and adjourn the discussion regarding shut-down costs until a time when post-MRP projects are under consideration for implementation.

STAKEHOLDER FEEDBACK REQUESTED

- The IESO invites stakeholder feedback on the information presented in today's webinar.
- Please submit feedback by September 17 to engagement@ieso.ca.
- IESO will aim to review and respond to stakeholder feedback by the end of October 2020.

Appendix A: Option 4A – Tool Impacts

IT System	Description
Market Information Management	Collects bid and offers from participants and is the repository for the results of the Day Ahead Optimization System (DAOS) and Market Information System (MIS).
Energy Market Interface	The graphical user interface for market participants to allow management of bids and offers (submit, cancel, retrieve)
Energy Market Administration Tool	The graphical user interface for IESO business units to query market results and also manage market participant submitted data (e.g. approval of offer submission during mandatory window)
Dispatch Scheduling Optimization	The new optimization calculation engine system that will be developed from MRP (replaces MIS and DAOS, with enhancements)
Commercial Reconciliation System	Responsible for reconciling the market, the calculation of monies owed to or from participants resulting from their activities in the IESO Administered Market, and the issuance of settlement statements