

HDR Out-of-Market Activation Payments

Demand Response Working Group

September 4, 2019

Purpose

- Review and respond to feedback on proposal to provide payments to compensate Hourly Demand Response (HDR) when activated out-of-market for:
 - Capacity based test activations
 - Emergency Operating State Control Action (EOSCA) activations
- Discuss next steps for implementing proposed design
- Review draft market rules and manuals

Context

- At the June 19 DRWG, the IESO identified three high-level approaches to compensation when HDR resources are activated out-of-market
 - 1) Using energy bids as representative costs;
 - 2) Historical precedents, such as Capacity-Based Demand Response (CBDR) activation payments; or
 - 3) Identify costs on individual or type of resource basis.
- It is difficult for the IESO to know the 'true' cost of out of market activations
- Need to determine approach that is appropriate to the circumstances

Proposal

At the July 29 DRWG, the IESO proposed the following dual approach:

- Test Activation
 - Apply fixed payment of \$250/MWh curtailed
 - Payments are based on CBDR precedent (\$200/MWh) with escalation
- EOSCA Activations
 - Payments based on a participant's (Bid-HOEP) x hours of curtailment
 - Where HOEP is the Hourly Ontario Electricity Price

Why the Dual Approach?

Different
treatment for
different
circumstances

- A fixed payment for tests offsets some of the cost of out-of-market activation using a previous precedent while managing costs to the market for testing
- A bid-based payment for EOSCA appropriately reflects the value to the market in the rare event of curtailing HDR to manage Energy Emergency Alert situations

Proposal

- The proposal is meant to strike a balance:
 - Broadly responsive to stakeholder concerns and proportional to circumstances, while also accounting for the unique HDR participation framework
- As part of the proposal, the IESO will review the design on a regular basis (e.g. after 1 year) with DRWG to discuss the effectiveness of the design

Stakeholder Feedback

Stakeholder Feedback

- Stakeholder feedback is summarized below and responded to in the following slides. Feedback was received from:
 - Advanced Energy Management Alliance (AMEA)
 - Market Surveillance Panel (MSP)
 - Rodan Energy Solutions
- AEMA, Rodan :
 - Payment for testing should also be bid-based
 - CBDR not a similar program and \$250/MWh may not cover costs
 - Trying to value these costs is extremely difficult
 - Willing to accept test \$250/MWh for testing if loads are permitted to schedule their own tests
- MSP:
 - Test activations: payment is a subsidy not available to other DR resources; including costs for test activations in auction bids is most effective approach
 - EOSCA activations: will not incent lower bids; a better approach is to use actual costs as is done with guarantee programs; this would not be an administrative burden given rarity of events

Bid-Based Compensation

- The IESO has no ability to confirm whether bids reflect real-time price sensitivity or the desire to avoid being 'activated' in the market, and therefore no indication as to whether bids reflect costs
- At the last stakeholder webinar (July 29), the IESO outlined some of the fundamental differences between HDR bids and physical dispatchable resources
 - IESO does not settle consumption against HDR bids; no real-time dispatch instructions to comply with as is the case with dispatchable resources
 - The IESO has no visibility as to whether resources continue to consume if the price of electricity in real-time goes very high

Testing Payment Insufficient

- The IESO and stakeholders note that determining the 'actual' cost of out-of-market testing is extremely difficult
- The proposal of \$250/MWh was meant to strike a balance
 - It is based on something used in the past
 - It does allow for some efficiency gains in the auction to the extent this offsets testing costs
- The IESO has committed to review this design after one year to determine its effectiveness

Testing Scheduled by Loads

- The IESO does not believe that scheduling tests is a viable option as this could undermine the ability to demonstrate the reliability of the resource
- However, through the HDR Resource Testing Proposal (to be discussed in an upcoming item at this working group meeting), the IESO has proposed changes to refine overall testing requirements for HDR participants

Subsidy Not Available to Other Resources

- Dispatchable resources may be eligible for ‘make-whole’ payments for out-of-market testing (such as unit readiness, operating reserve tests, etc.)
- Improved efficiency is one of the key drivers for the proposal
 - The next slide outlines why it is more efficient to compensate HDR for testing rather than having this cost be included in auction offers

Impacts: Cost and Efficiency

Compensating HDR for testing improves the efficiency of the auction

In a competitive auction...

Participants will not have to factor in the cost of testing in their future auction offers

Lower auction offers = lower auction clearing prices paid to *all* participants

Result: Cost recovery for testing outside of the market actually reduces the total cost of the auction

EOSCA Payments will not Incent Lower Bids

- As outlined at the July 29 webinar, the bid reflects HDRs desire to not be activated regularly and only just ahead of the IESO having to take out of market control actions
- Lowering *energy bids* has never been an objective of this exercise
- The objective is focused on achieving more efficient *auction offers* (see slide on costs and efficiency)

Reviewing Actual Costs does not Create an Undue Burden Because Events are Rare

- IESO disagrees with the argument and the assumptions:
 - There is little correlation between the *frequency* of an event and the administrative/legal/regulatory burden of a design to support a program
 - ie the burden of developing a quasi-regulatory regime and audit are required, even if it is rarely used
 - The ongoing cost of administration, pre-approved cost submission and resubmission, and adjustments to reflect changes to underlying contributors would be independent of whether or not they receive an EOSCA activation
 - Experience with RT-GCG (real-time generator cost guarantee) highlights challenges with understanding and determining 'eligible costs' after-the fact
 - These aspects and experience further support the streamlined approach

Proposal

- The IESO believes the proposal strikes a reasonable balance
- The proposal will include a review after one year to evaluate effectiveness
- Next slides highlight draft market rule and manuals

PROPOSED MARKET RULE AND MARKET MANUAL AMENDMENTS

Proposed Market Rule and Market Manual Amendments

- The IESO proposes amending the following Market Rules and Market Manuals in order to enable HDR market participants to receive out of market activation payments when activated for testing or in relation to an emergency operating state:
 - Market Rules Chapters 7 and 9
 - Market Manuals 5 & 7
- In order to avoid Market Rule changes in the middle of a commitment period, this proposed amendment will have a proposed effective date to coincide with the first TCA commitment period (May 1, 2020)
- The IESO is seeking stakeholder feedback on such amendments by September 11, 2019

Market Rules Chapter 7 - System Operations and Physical Markets

19.4 Energy Market Participation for Hourly Demand Response Resources

19.4.15 The *hourly demand response* resource shall ~~not~~ be entitled to compensation for ~~for any costs related to any~~ valid test activations_s conducted during a *commitment period* pursuant to this section 19.4 and in accordance with the applicable market manuals.

Activation of Hourly Demand Response Resources leading up to or during an Emergency Operating State

19.4.16 A capacity market participant with a capacity obligation participating as an hourly demand response resource shall be entitled to compensation for an activation leading up to or during an emergency operating state pursuant to section 2.3 of Chapter 5, and in accordance with the applicable market manuals.

Market Rules Chapter 9 – Settlements and Billing

4.7J Capacity Obligations

4.7J.5 The IESO shall remit a test activation payment or emergency activation payment for a valid test activation or emergency activation of an *hourly demand response* resource, associated with a *capacity obligation*, if any, to the applicable *capacity market participant*, in the manner specified in the applicable *market manuals*.

Market Manuals Approach

- New single Charge Type (1320) called “Capacity Obligation – Out of Market Activation Payment”

Equation 1 - For valid test activations

$$\text{Payment} = \text{HDRTAPR} \times \text{HDRDC}_h$$

Where

- *HDRTAPR* is the out of market test activation payment rate (\$250/MWh)
- *HDRDC_h* is the curtailed capacity (MW) for the HDR for that hour

Equation 2 - For emergency activations

$$\text{Payment} = (\text{HDRBP}_h - \text{HOEP}_h) \times \text{HDRDC}_h$$

Where

- *HDRBP_h* is the HDR Bid Price
- *HOEP_h* is the Hourly Ontario Energy Price
- *HDRDC_h* is the curtailed capacity (MW) for the HDR for that hour

Specific Market Manual Amendments

Market Manual 5.5 Physical Markets Settlement Statements

- New Section 1.6.26.2.1 Out of Market Activation Payments for Hourly Demand Response Resources
- Include a description of charge type 1320 and equations

IESO Charge Types and Equations

- Section 2.1 Variable Descriptions Add new variables
- Section 2.2 Charge Types and Equations Add equations and charge type
- Section 2.4.2 Add Charge Type 1320

Format Specifications for Settlement Statement Files and Data Files

- Add Charge Type 1320 to Table 2-5: Charge Type/Category Cross Reference
- Add Charge Type 1320 to Table 2-6: Primary Charges – Specific Charge Columns
- Add Charge Type 1320 to Appendix A: Charge Type Column Cross Reference

Specific Market Manual Amendments

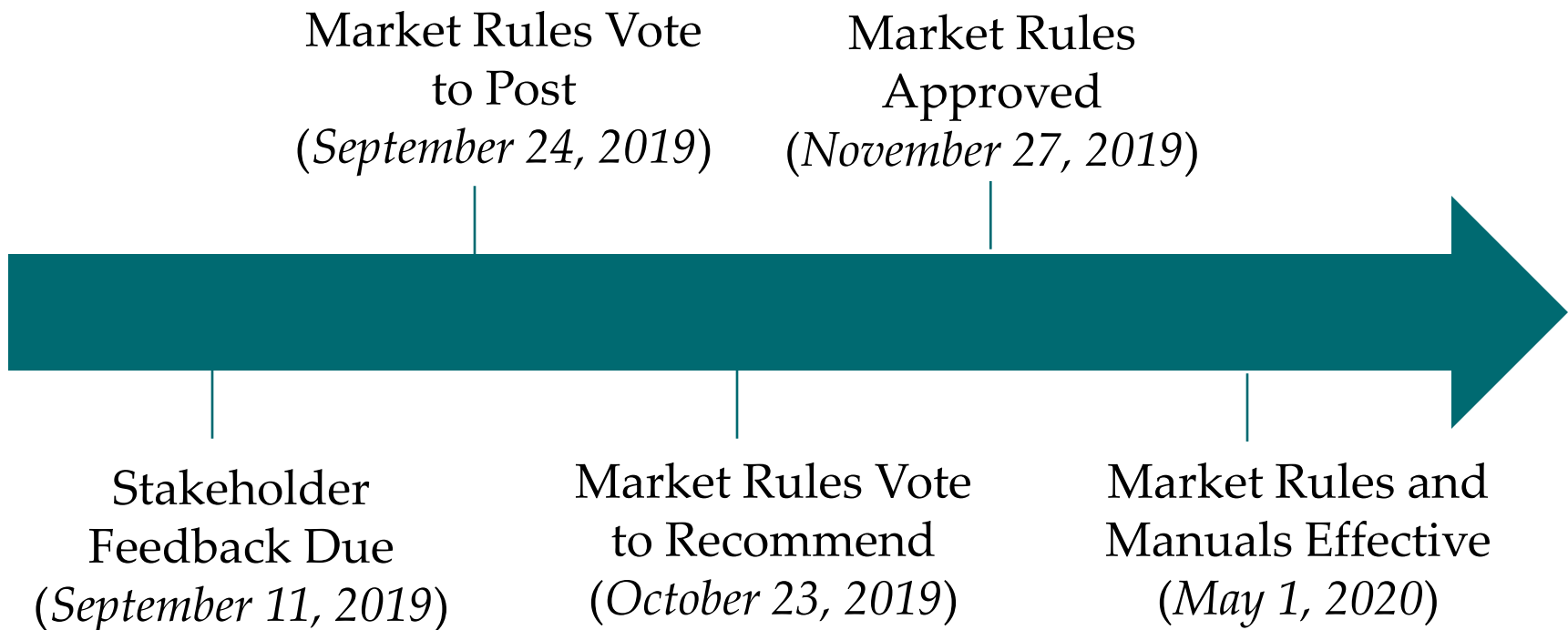
Market Manual 12.0 Capacity Auctions

- Section 6.3 Settlements
- Add clause that capacity market participants with HDR resources will be compensated for out of market activations as detailed in Market Manual 5.5

Market Manual 7.3 Outage Management

- Section 4.2.4 Demand Response with Capacity Obligations
- Strike sentence stating 'no compensation will be provided to demand *response market participants* for any costs related to test activation conducted during an *obligation period*'.

Next Steps



Please send written feedback to engagement@ieso.ca