

NOTIFICATION AND ACTIVATION OF HOURLY DEMAND RESPONSE RESOURCES

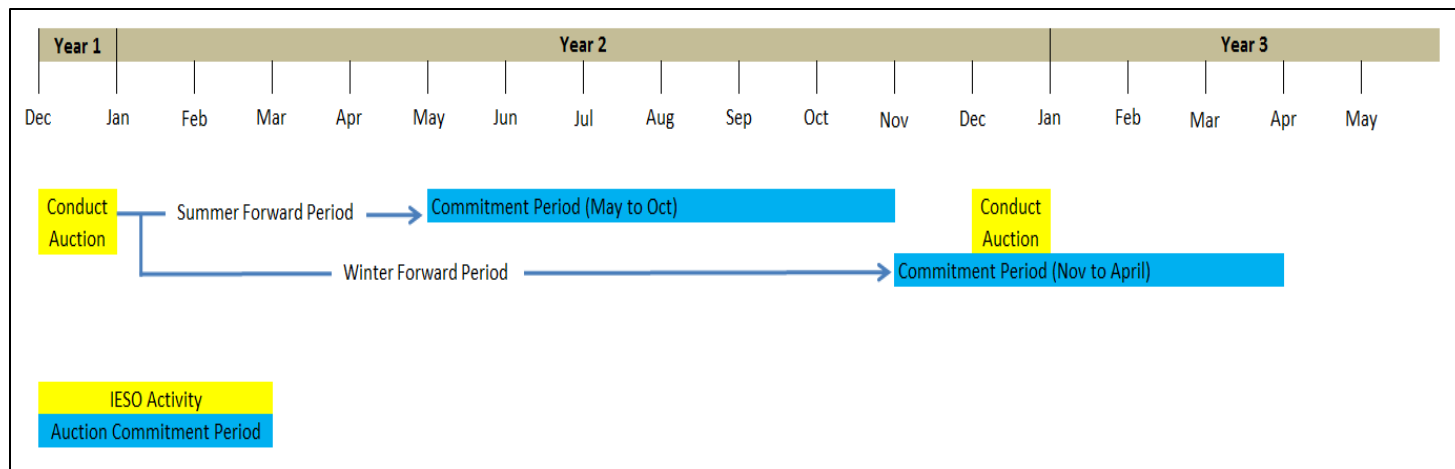
Technical Panel

June 27, 2017

Tom Chapman, IESO

What is the DR Auction?

- The DR Auction is the primary mechanism used by the IESO to select the lowest cost set of DR resources
- Participants competitively offer DR capacity (price/quantity) by IESO zone for a commitment period
- The auction clearing engine will determine participant capacity obligations and the auction clearing price
- The capacity obligation is fulfilled in the energy market



Improvements to the Economic Dispatch of Hourly DR

- The IESO has made significant progress transitioning DR into the IESO electricity market through the DR auction which has been in operation for 2 years
 - While many DR participants have been activated and dispatched during that time, the criteria for dispatching Hourly Demand Response (HDR) resources is not well aligned with market realities
- The IESO, together with stakeholders, has reviewed the notification and activation criteria for HDR to ensure it is being utilized in a way that meets system needs and reflects participant's capabilities

Activities to Date

The 2017 work plan was proposed to stakeholders at the April 6th DRWG, with **“Improved Utilization of DR”** listed as one of the priority items

April 6th

- The IESO presented a range of possible solutions to be considered when looking to enhance the economic dispatch of HDR

May 9th

- Stakeholder feedback from the April DRWG helped form 6 proposed options which were presented at this Webinar

May 30th

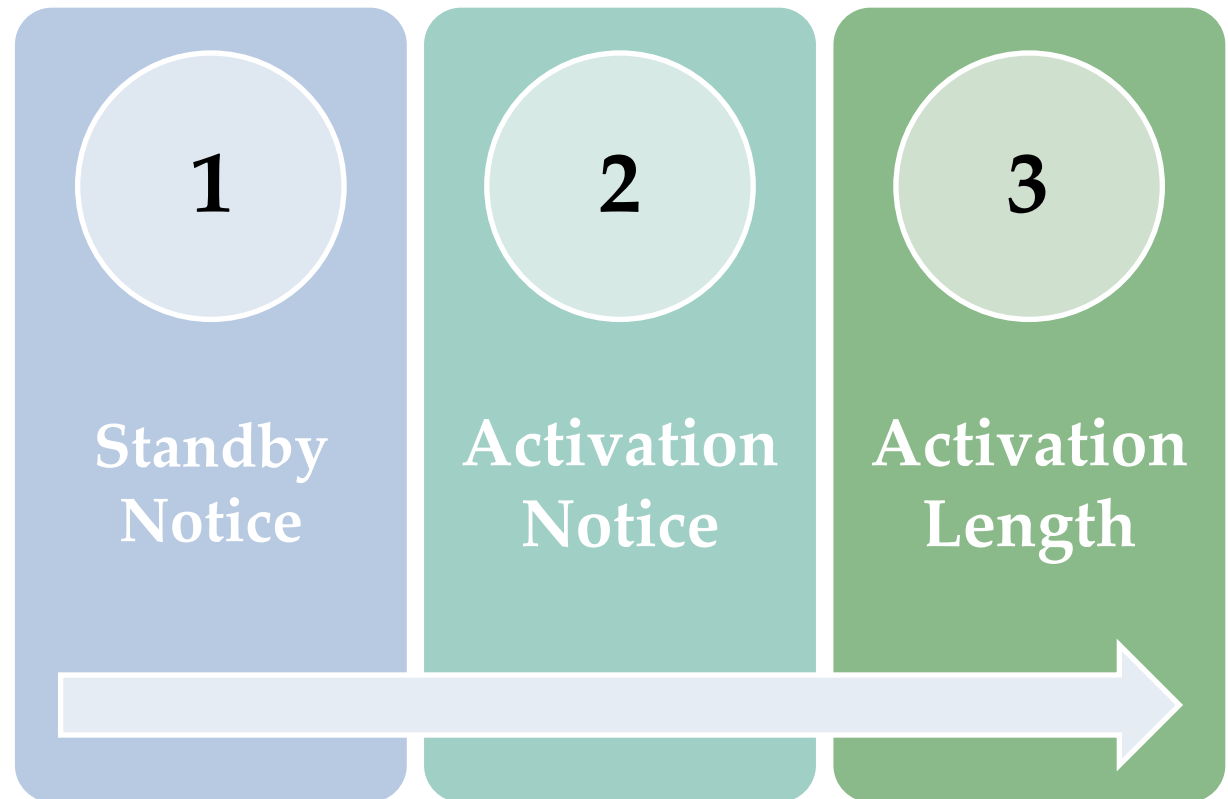
- Further stakeholder feedback, and analytical findings for each of the 6 options were presented at the DRWG

May 30th – June 8th

- Further review of stakeholder feedback received in response to the recommendations proposed at the May 30th DRWG

Increasing the Economic Dispatch of HDR

Within the Auction design there are three levers which can change the degree and likelihood of economic dispatch



Criteria for improvements

In improving the utilization of hourly DR, the IESO looks to meet the criteria below

- Must support efficient dispatch and evolve the effectiveness of the DR resource
- Is likely to increase the number of Hourly DR Activations to demonstrate DR value when economic
- Balances stakeholder and IESO operational needs
- Can be implemented for the next DR Auction in December 2017

Proposed change to Standby Notice

Stakeholder response

The consensus from stakeholders was that the standby notice should remain but be reduced from the current requirement, which is 4 consecutive hours when predispatch is above the price threshold.

Stakeholders also stressed the importance of implementing a price threshold that aligns the number of standby notices with likely activations

Proposed change

Standby
if $1\text{hr} > X$

- Reduce the 4-hour scheduling requirement to 1 hour, standby notice is sent when 1 hour in the Availability Window $> \$X/\text{MWh}$ in the predispatch

Proposed change to Activation Notice

Stakeholder response

Stakeholders were supportive of the proposal to reduce the 4 consecutive hour activation notice requirement in order to facilitate future activations

Proposed change

PD-3 > \$ Bid
for a min of
1-hour

- Maintain the activation notice but reduce the criteria such that an activation notice is sent when a DR resource is scheduled for **at least 1 hour** within the Availability Window in the 3 hour-ahead predispach

Proposed change to Activation Length

Stakeholder response

The vast majority of stakeholders saw value in decreasing the length of activation from a fixed 4 hour block to 1-up-to-4 hours. While there were some stakeholders who preferred to maintain a 4 hour schedule for operational considerations, there was also an appreciation of the flexibility Hourly-DR resources are able to provide

Proposed change

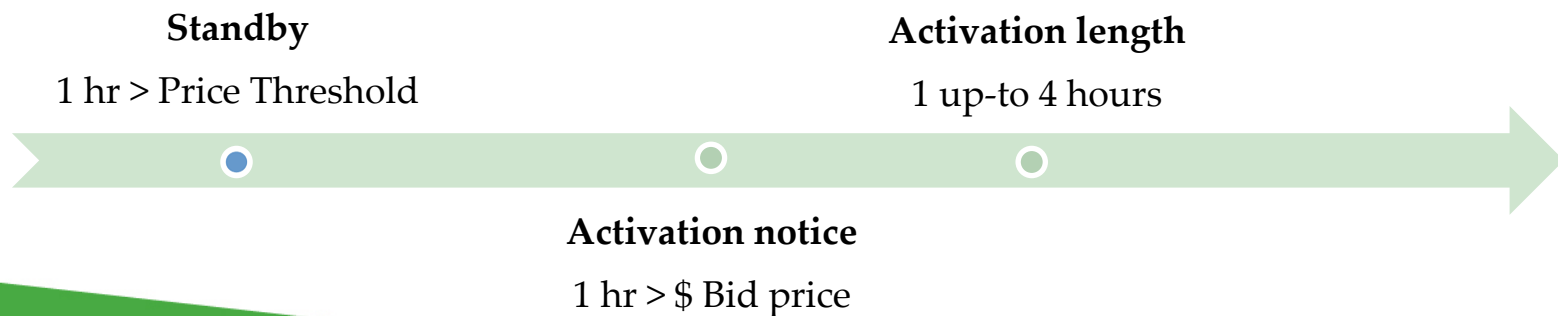
1-up-to-4
hours

- Align activation block hours with only those hours scheduled in predispatch, up to 4 consecutive hours

Benefits of IESO Recommendations

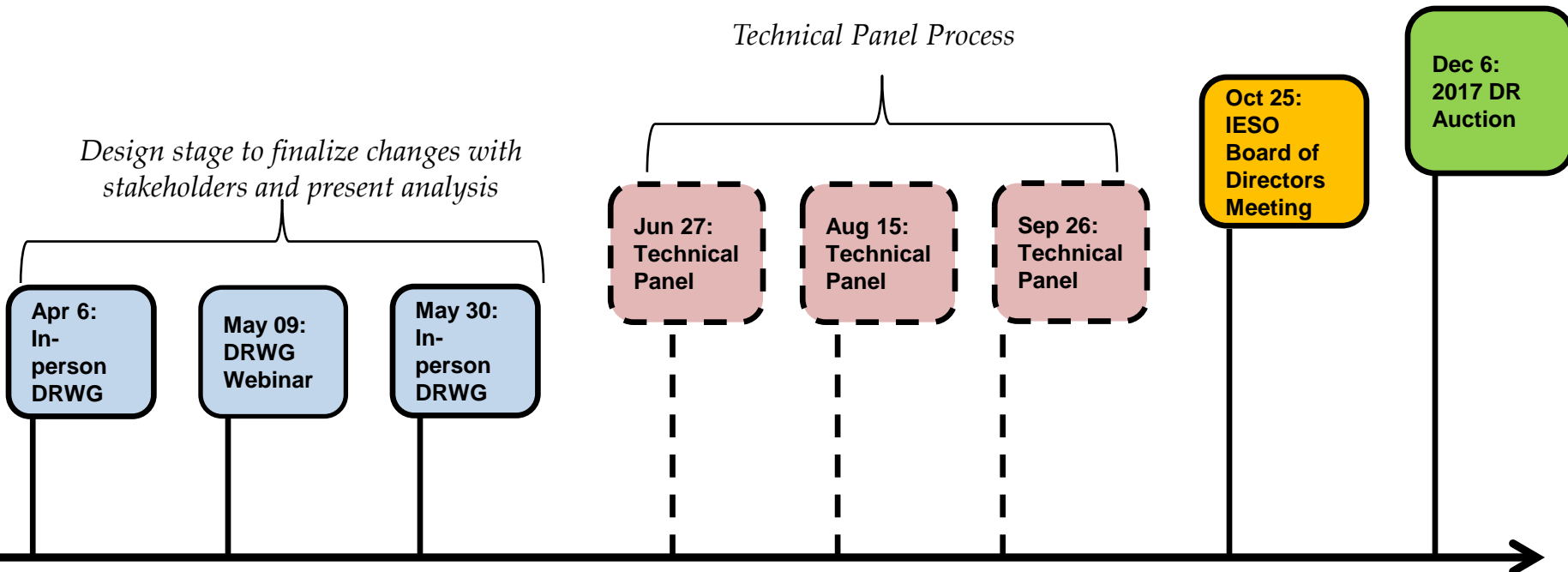
The recommended changes to the standby and activation criteria provide the following benefits:

- ✓ Evolves the DR resource
- ✓ Increases likelihood of Hourly DR Activations
- ✓ Consensus option from vast majority of stakeholders
- ✓ Can be implemented for the next DR Auction



Timeline for Changes

In addition to the timeline below the IESO will schedule a DRWG session in July to finalize the design changes with stakeholders



Peaksaver transition to the DR Auction

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Tom Chapman, IESO

Update on *peaksaver* transition

- The IESO's goal is to facilitate the participation of *peaksaver* resources in the DR Auction after termination of the program, while reducing barriers to their participation in the energy market
- Members of the DRWG agreed that the transition of the *peaksaver* program to the DR Auction is a high priority item for 2017
- The IESO continues to work with stakeholders in the DRWG to review and address transition issues

Next Steps

- An additional DRWG will be scheduled for July to discuss potential options for adding *peaksaver* MWs to the auction
- The IESO's preferred option will need to satisfy the following criteria:
 - Be consistent with the DR Auction design
 - Be consistent with the long term goals for DR and future capacity auctions
 - Minimize any cost impact to consumers
 - Minimize administrative burden and be implementable for 2017 Auction