



Capacity Auction Enhancements

March 31, 2026

Capacity Auction Team



Welcome!

We will begin momentarily. Please ensure your microphones are muted. Thank you.

Territory Acknowledgement

The IESO acknowledges the land we are delivering today's webinar from is the traditional territory of many nations including the Mississaugas of the Credit, the Anishnawbe, the Chippewa, the Haudenosaunee and the Wendat peoples and is now home to many diverse First Nations, Inuit and Métis peoples. We also acknowledge that Toronto is covered by Treaty 13 with the Mississaugas of the Credit First Nation.

As we have attendees from across Ontario, the IESO would also like to acknowledge all of the traditional territories across the province, which includes those of the Algonquin, Anishnawbe, Cree, Oji-Cree, Huron-Wendat, Haudenosaunee and in addition to the Métis and Inuit peoples.

Welcome and Introduction

- This engagement is conducted according to the [IESO Engagement Principles](#)
- Today's session will be recorded and available for viewing online
- All documents associated with this engagement can be found on the IESO's [Capacity Auction Enhancements](#) engagement webpage

Participation

- For questions and comments click on the “Raise hand” icon (hand symbol) at the top of the application window. This will indicate to the host you would like to speak
- To unmute audio, click on the microphone icon at the top of the application window
- Audio should be muted when not asking a question
- Connection issues contact engagement@ieso.ca or Microsoft Office Support

Today's Discussion

- The IESO is continuing engagement activity on Capacity Auction (CA) enhancements and will discuss feedback from the January engagement.
- The IESO will provide updates from its review of Hourly Demand Response (HDR) Market Operations and outline plans for a path forward.
- The IESO will share a high-level roadmap for 2026-2028 enhancements.
- The IESO will discuss 2026 enhancements, including several administrative enhancements that are achievable quick wins focusing on improving the underlying tools and processes that support the Capacity Auction.

Agenda

- Stakeholder Feedback from January 2026 Engagement
- Update on 2026-2028 Enhancements Roadmap
- 2026 Administrative Enhancements
- Summary and Next Steps



Summary of Stakeholder Feedback: January 2026 Session

January Stakeholder Feedback

- The IESO requested feedback following the January 29, 2026 stakeholder engagement session and seven responses were received.
- The IESO's response to stakeholder feedback is posted to the [Capacity Auction Enhancements](#) engagement webpage.
- The following slides focus on stakeholder feedback related to topics discussed in today's presentation.

Proposed HDR Objective Statement

Feedback:

- Stakeholders generally support the intent of the proposed HDR Objective Statement.
- Several stakeholders suggested revisions to include specific issues and market observations to guide future enhancements.

Response:

- The IESO acknowledges and appreciates the suggested revisions to the HDR Objective Statement. However, these suggestions are more appropriately considered as potential outcomes of future design discussions, rather than objectives themselves.
- The IESO believes that the HDR Objective Statement (as presented in the January 2026 engagement and included on the next slide) is sufficiently broad to encompass the issues and observations raised by stakeholders.

HDR Objective Statement

- *HDR resource enhancements should help achieve the following objectives:*
 - *Increase operational certainty for the IESO in the delivery of capacity that is called on by incenting more reliable performance of HDR resources.*
 - *Provide greater transparency and operational certainty for HDR resources.*

HDR Market Operations

Feedback:

- Stakeholders expressed concerns over the current HDR standby trigger, uncertainty around activation payments, operational challenges around partial activations and increased frequency of activations.

Response:

- The IESO appreciates the extensive feedback provided by stakeholders.
- The IESO will discuss its responses in the HDR Market Operations section of the presentation.



HDR Market Operations

HDR Standby Notice Price Trigger – Stakeholder Feedback

- Stakeholders expressed concern that the current \$200/MWh HDR standby notice price trigger generates too many standby notices that do not reliably correlate with actual activations.
- This high volume is contributing to participant fatigue and reduces the usefulness of standby notices as an operational signal.
- Stakeholders requested the IESO to increase or redesign the trigger to better indicate the likelihood of being activated.

HDR Standby Notice Price Trigger – IESO Response

- The IESO acknowledges the stakeholder concerns regarding the current \$200/MWh standby notice price trigger in the renewed market.
- The IESO will conduct an assessment in Q3 2026 after collecting a full year of renewed market data, including both summer and winter obligation periods. The results of this assessment will inform the IESO whether an update to the standby notice price trigger is warranted.
- A summary of the assessment will be presented to stakeholders. If an update to the standby notice price trigger is warranted, it is targeted to be implemented as part of the 2026 auction enhancements.

Activation Payment Certainty – Stakeholder Feedback

- Stakeholders expressed concerns about lack of clarity regarding whether HDR activations qualify for payment under the market rules.
- They highlighted confusion due to the rise in economically driven activations and the absence of signals, such as a Conservative Operating State or EEA-1 declarations, making it difficult to determine payment eligibility.
- Participants requested clearer communication, better differentiation between economic vs. emergency-based activations, and more transparent interpretation of payment eligibility to reduce operational uncertainty and risk.

Activation Payment Certainty – IESO Response

1/4

- The IESO acknowledges stakeholder concerns regarding the uncertainty around payment for economic activation of HDR resources.
- IESO issues EEA-1 and Conservative Operating State advisory notices to provide early awareness of tight or potentially stressed system conditions, helping participants prepare in advance.
- These notices are strictly informational signals and are not intended to serve as criteria for HDR Activation Payments.

Activation Payment Certainty – IESO Response

2/4

- Per the Market Rules, HDR resources are entitled to compensation for activations that occur "*...leading up to or during an emergency operating state.*"
- When this occurs, market participants receive a make-whole payment equal to the difference between their bid price, typically \$1,999 or higher, and the Ontario Zonal Price or, if the resource is a PRL, the Locational Marginal Price.
- Activation of HDR resources can be a result of manual constraint by the Control Room or economic dispatch by the DSO.

Activation Payment Certainty – IESO Response

3/4

- In this most recent summer and winter obligations, some activations were a result of manual action by the Control Room and some were due to the LMP in the pre-dispatch (PD-3) scheduling run exceeding \$1,999/MWh, indicating significant global or local system stress and scarcity – conditions that typically precede and emergency operating state declaration.
- Accordingly, the IESO deemed these activations met the requirements for activation payments under the Market Rules and HDRs have been compensated.

Activation Payment Certainty – IESO Response

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- The IESO intends to continue this precedent and provide compensation for HDRs when the following conditions occur:
 1. The Control Room manually activates an HDR resource, or
 2. The PD-3 scheduling run price associated with the activation is at or above \$1,999
- As long as HDRs bid at or above \$1,999, their activations will meet this threshold and be compensated for energy delivered per the Market Rules.

Partial Activations – Stakeholder Feedback

- Several stakeholders raised concerns about the operational impacts of partial activations. Stakeholders emphasized that partial dispatches are operationally impractical, especially when activation quantities are very small, creating challenges for industrial customers whose curtailment capabilities are often all-or-nothing.
- Stakeholders highlighted that cascading or fluctuating MW dispatch quantities within the same event increase execution risk and reduce the ability to plan curtailments effectively.

Partial Activations: IESO Response – Underlying Causes 1/2

- The IESO acknowledges stakeholder concerns regarding partial activations and has completed an internal review to understand the underlying causes:
- **Virtual HDRs**
 - Primary driver for partial activations: tiebreak process when multiple virtual HDRs at the same node submit identical bid prices. Market Rules (Chapter 7, Appendix 8.3.2.1) require remaining capacity to be allocated across tied resources, which can result in partial activations.
 - Even small bid-price differentiation can reduce the frequency of tiebreak-driven partial activations.

Partial Activations: IESO Response – Underlying Causes 2/2

- **Physical HDRs**

- Partial activations can occur: (1) Through the same tiebreak process, or (2) When the resource becomes marginal and remaining available capacity is less than the bid quantity.

- Other Observations:

- Partial activations represent a small share of total HDR activations ($\approx 3\%$ by count in summer 2025).
- Virtual HDRs account for $\sim 88\%$ of partial activations.

Partial Activations – IESO Response – Path Forward

- The IESO will:
 - Continue monitoring partial activations closely
 - Assess long-term solutions through the three-year enhancement plan
 - Considering how other market improvements (e.g., those affecting activation frequency) may interact with this issue
- In the interim, understanding the drivers of partial activations may help inform HDR bidding strategies.

Frequent Activations – Stakeholder Feedback

- Stakeholders emphasized that HDRs were designed to function as an emergency reliability resource, not as a frequent economically dispatched product. The increasing frequency of standby notices and activations are contributing to participant fatigue and undermining confidence in the program.
- Several stakeholders noted that recent activations appear to be driven more by economic signals than genuine system needs. They requested clearer differentiation between emergency and economic activations, as well as more transparent signaling.

Frequent Activation – IESO Response

- The IESO understands that participants have concerns related to the efficient and effective operation of HDR resources in the market. We appreciate stakeholders raising these issues and remain committed to working collaboratively to provide clarity and support informed participation.
- HDR resources have historically bid at \$1,999/MWh or higher, reflecting: (1) a desire to be activated less frequently, and (2) their role as a resource used when the system is under significant stress or scarcity—when LMPs in the pre-dispatch (PD-3) scheduling run exceed \$1,999/MWh.

Frequent Activation – IESO Response – Observations

- HDR activations over the past year occurred during challenging system conditions, including:
 - Sustained heat waves
 - Early-onset cold weather
- During these periods, the market produced schedules that supported reliable operation and were closely aligned with supply and demand fundamentals.

Frequent Activation – IESO Response – Path Forward

- The IESO Markets team is reviewing HDR activation timing to address stakeholder concerns:
 - HDRs are committed in PD-3 (three hours before the activation hour), while other supply offers may continue updating until PD-2.
 - Markets team is assessing whether this timing affects HDR activation frequency and whether adjustments could support a more efficient market outcome.
 - More information will be shared at a future engagement session.
- The IESO remains committed to transparency, ongoing engagement, and ensuring the HDR framework works effectively for participants and the system.



2026-2028 Enhancements Roadmap

Engagement Approach

- Enhancements will be introduced for the next three auction cycles, starting with the 2026 Capacity Auction.
- Enhancements will be planned through a multi-year lens, ensuring alignment and continuity across annual designs.
- IESO will use a regular cadence of engagement sessions to review proposed enhancement designs and gather stakeholder feedback.
- Design memos will document final designs in detail and inform updates to Market Rules and Manuals. Stakeholder feedback will also be sought on the design memos to ensure the design intent is accurately captured.

High-Level Planned Engagement Timelines

- The Gantt chart shown below outlines planned engagement timelines for the three-year enhancements program.

Auction Year	2026-Q1	2026-Q2	2026-Q3	2026-Q4	2027-Q1	2027-Q2	2027-Q3	2027-Q4	2028-Q1	2028-Q2	2028-Q3	2028-Q4
2026 Auction Enhancements		[Green bar]										
Stakeholder Engagement		[Light green bar]										
Market Rules and/or Manuals		[Light green bar]										
2027 Auction Enhancements			[Blue bar]									
Stakeholder Engagement			[Light blue bar]									
Market Rules and/or Manuals					[Light blue bar]							
2028 Auction Enhancements							[Yellow bar]					
Stakeholder Engagement							[Light yellow bar]					
Market Rules and/or Manuals									[Light yellow bar]			

★ Market Rules and/or Manuals Effective

Updates to Prioritized Enhancements

- The enhancement schedule has been updated to reflect evolving priorities, recent stakeholder feedback, and latest available information.
- The revised enhancement work plan now extends through to 2028.
- Prioritized enhancements, target implementation dates, and the overall plan may continue to evolve as detailed scoping activities are completed.
- Additional adjustments may occur over time in response to performance results, resource adequacy needs, IESO resource availability, engagement discussions, and other relevant factors.

Prioritized Enhancements (2026)

Enhancement	High-Level Description	Target Implementation
HDR Standby Notice Price Trigger Review	Assessment to determine if an update to the standby notice price trigger is required	2026
Capacity Testing Processes	Details presented under 2026 Administrative Enhancements section	2026
Contributor Management Tool Enhancements	Details presented under 2026 Administrative Enhancements section	2026
Settlements Enhancements	Details presented under 2026 Administrative Enhancements section	2026

Planned Enhancements for 2027 and 2028 Auctions

- Planned enhancements for 2027 and 2028 are described on the following slides at a high-level and will continue to evolve as detailed scoping activities are completed.
- Enhancements will be informed by previously prioritized enhancements from [May 2024](#), discussions from the Demand Side Vision engagement, as well as by recent HDR market observations.
- Addressing recent HDR market observations will be a priority and may mean that some previously discussed enhancements will be considered post-2028.
- Final determination of enhancements undertaken will have to take into account potential work being considered by the Enabling Resources Program.

High-Level Planned Enhancements (2027-2028)

Enhancement	High-Level Description
Improve Performance	Incentivize more accurate, reliable performance including during market activations, and potential adjustments to the testing framework and resource qualification.
HDR Market Operations	Address HDR market issues considering things such as operational constraints, frequency and method of activation, and compensation.
Commitment Management Options	Consider updates to processes, tools and structures for participants to manage commitments.



2026 Administrative Enhancements

2026 Administrative Enhancements

- Administrative enhancements improve the underlying tools and processes that support the Capacity Auction, enabling more efficient and effective execution of auction processes and activities that support resource performance.
- For the 2026 Capacity Auction, the IESO will prioritize a set of achievable quick wins, recognizing the limited time available to design, develop and implement changes ahead of the 2026 auction.

2026 Administrative Enhancement Summary

Category	Detail
Capacity Testing Processes	<ul style="list-style-type: none">• Automate capacity test data submissions.• Clarification of a test assessment rule.
Contributor Management Tool Enhancements	<ul style="list-style-type: none">• Streamline contributor management and remove administrative bottlenecks to improve overall process efficiency.
Settlement Enhancement	<ul style="list-style-type: none">• Minor update to emergency activation payment formula.

Capacity Testing Processes

Overview:

- The IESO will streamline capacity test data submissions and clarify a capacity test assessment rule.

Scope:

- Introduce an interface in Online IESO for submitting capacity test data.
- Clarify treatment of the scenario where the calculated Delivered MW in an in-period cleared UCAP adjustment is less than 1 MW.

Benefits:

- A simpler way to submit capacity test data, and a clearer understanding of capacity test expectations and test outcomes for CMPs.

In-Period Cleared UCAP Adjustment for <1 MW Delivery

- When an in-period cleared UCAP adjustment applies to an HDR resource and the calculated Delivered MW is less than 1 MW, the IESO will continue to adjust the obligation to 0 MW for the remainder of the obligation period.
- However, the in-period cleared UCAP adjustment charge (CT-1323) will be revised to only claw back availability payments equal to the difference between the resource's obligation and the calculated Delivered MW from the resource's capacity test.

Contributor Management Tool Enhancements

Overview: The IESO will implement tool enhancements to streamline contributor management processes, reduce IESO administrative delays, and improve the general efficiency and effectiveness of contributor-related processes without changing market rules/manuals.

Scope:

- Enhancements to contributor management submission process in Online IESO, such as the introduction of participant task time-outs, and a review/update of validation rules.

Benefits:

- These enhancements will improve operational efficiency, reduce delays, and create a smoother experience for contributors and virtual HDR resources.

Settlement Enhancement

Overview:

- The IESO will make a minor update to the Emergency Activation Payment formula to rectify an edge-case scenario.

Scope:

- Revision of Emergency Activation Payment (CT-1320) formula that currently caps curtailed capacity to 0 MW when bids are greater than the capacity obligation for any given hour.

Benefits:

- This change will resolve an identified issue with the CT-1320 formula.

Revised Activation Payment (CT-1320) Formula

- The delivered capacity from HDR resources (HDRDC) is calculated for each hour of activation and forms part of the emergency activation payment (CT-1320) determination:

$$\text{Max}(0, \text{HDRBP}^{m_{k,h}} - \text{Max}(0, \text{HOEP}_h)) \times \text{HDRDC}^{m_{k,h}}$$

- A formula revision is required due to an edge case scenario where the scheduled quantity (DQSW) exceeds the obligation (CCO) or capability (CARC). In such cases, HDRDC would be negative, resulting in no emergency activation payment for the hour.

$$\text{Min}(\text{Curtailed MW}^{m_{k,h}}, \sum_{t=1}^{12} \left(\frac{\text{Min}(\text{TBQ}^{m_{k,h}}, \text{CARC}_{k^m}, \text{CCO}^{m_{k,h}})}{12} - \text{DQSW}_{k,h}^{m,t} \right))$$

Summary of 2026 Administrative Enhancements

- Stakeholders are invited to provide feedback on the 2026 administrative enhancements.
- The IESO will review and consider all feedback before finalizing the proposed changes, including any necessary updates to market rules and manuals.
- Updates to market rules and manuals will be presented at the next engagement session.



Summary and Next Steps:

Summary of Today's Discussion

- The IESO appreciates the detailed feedback following the January 2026 engagement and will continue to update stakeholders as the review of HDR Market Operations continues.
- The IESO updated its implementation roadmap for 2026-2028 enhancements based on stakeholder feedback and evolving priorities.
- The IESO provided details about 2026 enhancements, including administrative enhancements that are achievable quick wins focusing on improving the underlying tools and processes that support the Capacity Auction.

Next Steps

- The IESO is seeking feedback on the following: HDR market operations updates, the roadmap for 2026-2028 enhancements, and the 2026 enhancements discussed today.
- The IESO will continue planning for its three-year enhancements program and developing designs for the 2026 enhancements.
- The IESO anticipates holding another engagement in May 2026 to update on HDR Market Operations, 2026 enhancements, and roll out more details about its three-year enhancements program.

Request for Feedback

- A feedback form is posted on the [Capacity Auction Enhancements](#) engagement webpage.
- Feedback is due by April 15, 2026.
- Please contact engagement@ieso.ca if you have questions following this session.

Disclaimer

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ieso.ca

1.888.448.7777

customer.relations@ieso.ca

engagement@ieso.ca



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