

JANUARY 26, 2023

2023 Capacity Auction Enhancements

Overview

- Capacity Auction Enhancements Engagement Update
- Summary of responses to feedback from November 22, 2022, engagement meeting
- Update on Status of Engagement Topics
- Finalization of Design Memos
 - Forward Capacity Auction Update
- Next Steps

Recap: 2023 Enhancement Objectives

2023 enhancements contribute to ratepayer value by strengthening the IESO's ability to secure reliable capacity at lowest cost.

Capacity Qualification: Adopt transparent process to derive an Unforced Capacity (UCAP) value for all resources while accounting for unique resource participation frameworks

Performance Assessment Modifications: Modify performance assessment framework to incent improved performance from acquired capacity resources

Demand Curve Review: Update demand curve parameters such that the auction remains a cost-effective, reliable, and robust procurement mechanism within the Resource Adequacy Framework



Capacity Auction Enhancements Engagement Update

Capacity Auction Enhancements Design Memos

Final design memos have been posted for the following topics:

- 1.1: Non-HDR Qualification
- 2.1: Testing Framework
- 3.0: Charges & True-Ups
- 4.0: Standby Price Trigger Review
- 5.1: HDR Qualification
- 6.2: HDR Performance Thresholds & Contributor Outages
- 7.1: Demand Curve Review

A summary of the designs and any modifications made based on the most recent stakeholder feedback is provided in this presentation.

Capacity Auction Enhancements Engagement Update

Competing internal priorities and resourcing require modifications to previously communicated engagement and implementation timelines.

These modifications allow an opportunity for additional engagement on the design of the Performance Adjustment Factor (PAF) to address outstanding stakeholder concerns.

A separate design memo documenting the PAF design, including modifications, if any, resulting from additional engagement discussions, will be finalized in advance of the Technical Panel process for 2023 administrative updates, as part of the Stream 2 engagement and implementation timeline.

Updates to Design Memos

The capacity qualification process and resource-specific methodologies, independent of the PAF, are documented in Design Memo 1.1 – Capacity Qualification (Non-HDR) and Design Memo 5.1 – Capacity Qualification (HDR).

The designs captured in these memos will be included in Stream 1 market rule and manual amendment drafts posted for stakeholder feedback in March 2023.

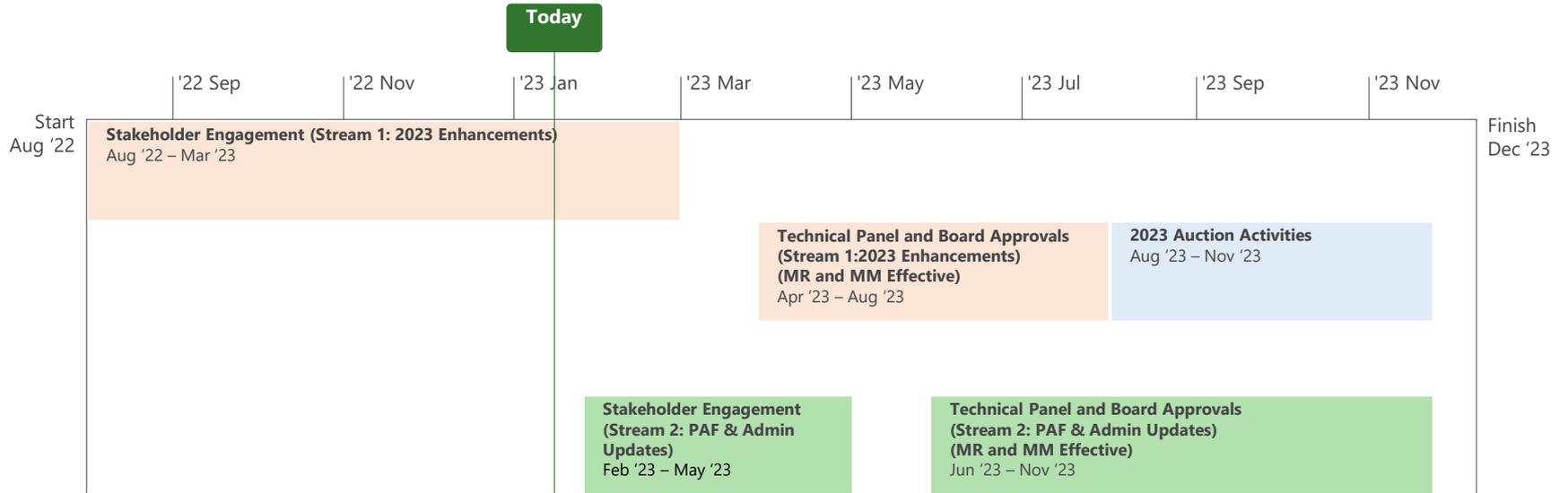
Revised Engagement and Implementation Timelines

Timelines have been revised to reflect the following changes:

1. Stream 1 - Draft market rule and manual amendments for completed designs will be posted for stakeholder feedback in March 2023
2. Stream 2 – Engagement on PAF and 2023 administrative updates to begin in February and conclude before June

A high-level timeline graphic reflecting these updates is provided on the following slides.

Revised High Level Timeline – Stream 1 and 2



Stream 1 Implementation Timelines - Details

	Activity	Tentative Dates
Engagements	General Session – 5	January 2023
Technical Panel & Board Approvals	TP - Education	April 2023
	TP - Vote to Post	May 2023
	TP Vote to Recommend	June 2023
	Board Approval (MR)	June 2023
	OEB Review Period	July 2023
	Market Rule Effective	July 2023
	Market Manual Effective	August 2023

Market Rule/Manual Release Schedule

Stream	Design Enhancement	Draft Document Review	Status
1	<ul style="list-style-type: none">Capacity Qualification (non-HDR) (design memo 1.1)Testing Framework (design memo 2.1)Charges and True-Ups (design memo 3.0)Capacity Qualification (HDR) (design memo 5.1)HDR Contributor Outages (design memo 6.2)Performance Thresholds (design memo 6.1)Demand Curve Elements (design memo 7.1)	March 2023	In Progress
2	<ul style="list-style-type: none">Administrative UpdatesQualification: Performance Adjustment Factor	Q2 2023	In Progress



Key Stakeholder Feedback & Responses

(From November 2022 engagement session)

Key Stakeholder Feedback and IESO Response

- A selection of stakeholder comments and IESO responses relevant to the topics being discussed today is included in the following slides to inform discussions on upcoming engagement activities and timelines discussed later in this presentation
- A document containing a more extensive summary of stakeholder feedback from the November 2022 engagement session and IESO responses has been posted on the engagement webpage

Qualification: HDR Resources

Feedback

Stakeholders suggested that to enable better flexibility in managing Demand Response portfolios, the following enhancements should be considered:

- Enabling monthly buy-outs
- Allowing aggregators to register multiple resources per zone

IESO Response

Enabling monthly buy-outs would fundamentally change the capacity auction product, which is a six-month summer and winter product. Changes of this nature need to be considered within the context of the objectives of the auction, potential impacts to ratepayers and the reliability of the system.

Additional stakeholder engagement required to understand the potential benefits of enabling multiple HDR resources per zone to stakeholders and the IESO, how these additional resources would be utilized by resource owners, and how effective implementation could be achieved.

Considering that these proposed enhancements would require significant time for design, engagement and implementation, the IESO will not be including these new proposals in the enhancements for the 2023 Capacity Auction, and instead will include these topics in future auction enhancements discussions expected to begin in early 2023

Qualification: HDR Resources

Feedback

A stakeholder suggested that the IESO should apply de-rates at the contributor level and the de-rate should be in kW rather than a percentage.

IESO Response

Through the HDR qualification process, the IESO is qualifying the aggregator's ability to manage their resource and not the underlying contributors. A percentage de-rate is appropriate as an aggregator's ability to manage their portfolio is assumed to scale with the size of the portfolio.

Aggregators are best positioned to manage and determine the appropriate, reliable curtailment capability expected from each contributor included in a resource.

A stakeholder has asked the IESO to reconsider the benefit of avoided losses in HDR qualification.

IESO stated in the [July 2021 SE Response to Feedback Document](#) that accounting for line losses would require significant changes to the modelling of virtual resources and other measurement considerations. As part of future auction enhancements discussions expected to begin in early 2023, demand response stakeholders may wish to outline the potential benefits to ratepayers, the system, and participants this proposal may provide for consideration.

Qualification: HDR Resources

Feedback

Stakeholder expressed concern that a capacity test in a shoulder season does not necessarily reflect a resources' ability to deliver in peak months, leading to HDR aggregators being forced to clear at their minimum capacities and not their average capacities.

IESO Response

The ICAP value submitted into the Capacity Auction should reflect the maximum expected capability in MWs of a resource given ambient temperature and operating conditions, as specified by the Capacity Auction Participant. The IESO has made clear since the original [2022 Capacity Auction Enhancements Design Document](#) was published that all Capacity Auction Participants should account for some uncertainty of these conditions, or generally the ability to achieve this maximum capability, during a capacity test.

The IESO has provided guidance indicating the timeframe that the notice of the capacity test will most likely be issued (first two months of the obligation), enabling aggregators to manage their portfolios accordingly.

In-Period Adjustment

Feedback

Stakeholders requested clarity regarding the assessment of the in-period adjustment and whether any performance thresholds would be applied.

Stakeholders also requested clarity regarding the existence of a floor (or a cap) to the in-period adjustment.

IESO Response

There is no performance threshold, limit or cap in the calculation of the in-period adjustment.

The in-period adjustment is an alternative to the availability de-rate applied to all resources except HDR and system-backed imports. Since there are no performance thresholds, limits or caps applied when calculating the availability de-rates of other resources, out of fairness, the same approach will be applied to the in-period adjustment.

Outage Management

Feedback

A stakeholder provided an outage example in which a contributor's ability to curtail is on outage, but its load remains online (i.e. behind the meter (BTM) generator is on outage). The stakeholder suggests that BTM equipment outages be eligible for outage management.

IESO Response

This scenario would not qualify as part of the definition of an outage the solution is intended to address. The solution is designed to address the specific scenario where a contributor's outage negatively effects the baseline calculation during the in-day adjustment factor (IDAF) window due to load being absent and returning within one hour of the activation event.

In the example stakeholders provided, the outage of the BTM contributor's generator does not impact the load profile of the contributor. If the load on the day of activation is consistent with their historical load profile, performance would be accurately assessed without the design solution. The resource's underperformance was entirely due to weather sensitivity and IDAF's 20% threshold, which is not part of the scope of contributor forced outage management solution.

HDR: Overall impact of enhancements

Feedback

Stakeholders expressed concerns that the overall impacts of the changes affecting HDR resources made through the enhancements, including the application of the PAF, the application of the in-period adjustment and the modifications to the performance thresholds, represent a concentration of risk around the capacity test and the double recovery of charges.

IESO Response

IESO is continuing to review and consider the stakeholder feedback that was submitted on the PAF design and will schedule an additional engagement session to have further discussion on this design element.

The IESO disagrees with this feedback because it assumes the risks of a failed capacity tests are unavoidable. IESO has incorporated multiple design elements in the 2023 Capacity Auction enhancements intended to allow participants to adequately prepare for successful capacity tests and that reflect stakeholder feedback. Changes that have been made include:

- greater certainty around the timing of the test (notice to be issued within the first two months of the obligation period)
- the freedom for resources to self-schedule multiple capacity tests within a five-day window,
- a ten business-day advance notice of the five business-day testing week
- a contributor outage management process for certain outage scenarios

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HDR: Overall impact of enhancements

Feedback

Stakeholders expressed concerns that the overall impacts of the changes effecting HDR made through the enhancements, including the application of the PAF, the application of the in-period adjustment and the modifications to the performance thresholds, represent a concentration of risk around the capacity test and the double recovery of charges.

IESO Response

The IESO does not agree with assertion that the application of PAF and in-period adjustment amounts to double recovery of the charges applied. The PAF is a performance de-rate, calculated relative to ICAP, based on historical capacity test performance data that applies to all resources in the capacity qualification process and reduces the amount they are eligible to offer into the auction. The in-period adjustment adjusts the obligation and payments for HDR resources equal to what the resource actually delivered during a capacity test, if the resource did not deliver to its obligation/cleared UCAP. The capacity charge is the existing non-performance charge applied to any resource for failure to deliver to its obligation. The IESO is not proposing any changes to the capacity charge as part of the 2023 Capacity Auction enhancements.



Update on Status of Engagement Topics

Engagement Topics Status

The following section provides an update on the status of the engagement topics included as part of the 2023 Capacity Auction enhancements and how stakeholder feedback has been reflected in the latest revisions to the design memos

Engagement Topics Status

Topic #	Topic	Status	Draft Market Rule/Manual Review (if applicable)
1	Non-HDR Qualification	Complete	March 2023 Engagement Session
2	Testing Framework	Complete	March 2023 Engagement Session
3	Charges & True-Ups	Complete	October 24-26 Engagement Session
4	Standby Price Trigger Review	Complete	Late November effective
5	HDR Qualification	Complete	March 2023 Engagement Session
6	HDR Performance Thresholds & Contributor Outages	Complete	March 2023 Engagement Session

Engagement Topics Status

Topic #	Topic	Status	Draft Market Rule/Manual Review (if applicable)
7	Demand Curve Review	Complete	March 2023 Engagement Session
8	Forward Capacity Auction	Further Design Suspended. May be revisited in future	
9	Audit	IESO to engage on this in 2023 as part of the future enhancements	
10	Qualification: Performance Adjustment Factor (PAF)	In Progress	May 2023 Engagement Session

2.0 – Testing Framework

Stakeholder Feedback Received:

- Concerns from the HDR community regarding increased concentration of risk around the capacity test

Design Modification in Response to Feedback:

- Greater certainty provided around the timing of the test enables participants to better manage their risk and auction participation

2.0 – Testing Framework

Final Design:

- Capacity auction resources able to self-schedule a Capacity Test within IESO-determined test window
- IESO to issue notice to conduct capacity test within first two months of obligation period
- Capacity auction resources tested to their installed capacity
- Capacity auction resources subject to up to two Dispatch Tests per obligation

Final Design Memo: Design Memo 2.1 – Testing Framework

Engagement Status: Complete

5.0 – Qualification: HDR Resources

Stakeholder Feedback Received:

- Participants requested clarity regarding applicable thresholds and caps applied to the determination of the in-period adjustment, including for failure to submit test data

Design Modification in Response to Feedback:

- No performance thresholds, caps, or floors will be applied when calculating the in-period adjustment to ensure fair treatment with other resources who are subject to an availability de-rate
- Clarification on how failure to submit capacity test measurement data will be treated

5.0 – Qualification: HDR Resources

Final Design:

- In-period UCAP adjustment to be based on results of the self-scheduled Capacity Test
- If an HDR resource does not deliver to at least its capacity obligation (cleared UCAP):
 - The resource's capacity obligation will be adjusted to reflect the MWs delivered in the capacity test, retroactively effective to the first day of the obligation period.
 - A charge will apply which will be equal to the availability payments already received for the undelivered portion of the capacity obligation, less any availability charges incurred for that same capacity.
 - Failure to submit data will be treated as 0 MW delivered during the capacity test and result in the removal of all availability payments for the obligation

Final Design Memo: Design Memo 5.1 – HDR Capacity Qualification

Engagement Status: Completed

10.0 – Qualification: Performance Adjustment Factor

Update:

IESO is continuing to review and consider stakeholder feedback on the PAF design

A separate design memo documenting the PAF design, including modifications, if any, resulting from additional engagement discussions.

Timelines for further engagement on the PAF and associated market rule/manual changes will be coordinated with Stream 2: Admin Updates.

Further Details: [Design Memo 10 - Qualification: Performance Adjustment Factor \(PAF\)](#)
(to be posted pending further stakeholder engagement)

Engagement Status: In Progress

6.0 – Contributor Outage Management

Stakeholder Feedback Received:

- Stakeholders argued the solution should address additional scenarios beyond the defined outage scenario, such as behind the meter equipment outages

Design Clarification in Response to Feedback:

- Criteria for eligible contributor forced outages more clearly defined:
 - Contributor must be a physical or virtual C&I HDR contributor as part of a virtual HDR resource.
 - Contributor's load is on outage during in-day adjustment window and restored between one hour before an activation event (i.e. end of in-day adjustment window) and the end of the activation.
 - The maximum length of the outage does not exceed 15 consecutive calendar days.

6.0 – Contributor Outage Management

Final Design:

- Criteria for what constitutes an eligible contributor forced outage the solution can be used for more clearly outlined
- Includes details for communicating forced contributor outages to the IESO, including method, content, and timing of communications (within 5 business days following the activation)
- Includes the treatment of contributor outages in HDR data measurement audits

Final Design Memo: Design Memo 6.2 – HDR Contributor Outage Management

Engagement Status: Complete

7.0 - Demand Curve Review

Stakeholder Feedback Received:

- Stakeholders indicated support of the recommended updates

Final Design:

IESO will proceed with recommended updates to demand curve price parameters:

- Reference Price update to \$644/MW-day UCAP based on 2019 Brattle recommendation of \$542/MW-day ICAP and after accounting for inflation and the transition to UCAP.
- MACP update to 1.5x the Reference Price, for an MACP of \$966/MW-day UCAP.

Final Design Memo: [Design Memo 7.1 – Demand Curve Review](#)

Engagement Status: Complete

8.0 - Forward Capacity Auction

In light of other ongoing procurement activities, updated capacity needs assessments and recent annual capacity auction results, the benefits of an enhanced capacity auction with multi-year commitments may not be fully realized if pursued at this time. As such, further design activities on the proposed Forward Capacity Auction will be suspended until a time that the role and benefits this procurement mechanism can offer can be explored within the context of the Resource Adequacy Framework. The IESO appreciates stakeholder feedback provided on this engagement topic and will ensure future engagement activities consider the feedback that has been provided.



Next Steps

Next Steps

February 2023 Engagement Session:

- Engagement on Stream 2: Administrative Updates and Performance Adjustment Factor

March 2023 Engagement Session:

- Draft amendments to Market Rules and Market Manuals reflecting the completed 2023 enhancements (stream 1) to be presented
- Initiate engagement on future auction enhancements

Draft Market Rules and Manuals - Feedback

Engagement on the design of enhancements in Stream 1 is now complete

Future engagement activities will focus on draft market rule and manual amendments to implement the design

Feedback on draft market rule and manual amendments is requested on how accurately the draft market rule and manual amendments reflect the design discussion and final design memos posted on the engagement webpage.



Feedback

Please provide any feedback or comments to engagement@ieso.ca by **February 6, 2023**