Stakeholder Engagement Summary Memo

Background

The 2022 capacity auction enhancements were presented through the Resource Adequacy Engagement, which operates under the IESO's stakeholder engagement framework. Under this framework, the enhancement proposals were presented during regular, monthly engagement meetings, with a feedback cycle. In addition to the formal engagements, the IESO conducted a number of outreach meetings with the purpose of providing stakeholders further opportunity to seek clarity on the design and implementation with a particular group of impacted stakeholders or directly with certain organizations and/or associations.

The engagement covered three overarching design categories: qualifying capacity, enhancing the performance assessment framework, and expanding participation to generator-backed imports. The introduction of the 2022 capacity auction began in January, 2021, with more detailed discussions on the design enhancements commencing in May, 2021. The engagement on the design enhancements continued until February, 2022, while outreach discussions on the enhancements continued through April, 2022.

The IESO must hold a capacity auction at least once annually, per the Market Rules, and holds it in December of each year. The pre-auction period opens approximately 4-5 months prior to the auction. Introducing changes to the annual auction means both the design and implementation must be completed in a prescribed timeframe, to ensure Market Rules, Market Manuals, and auction tools are in place prior to the opening of the pre-auction period. This allows participants time to plan their participation in the auction, and ensures the rules governing the auction are effective prior to any auction period commencing. To achieve this, the design and implementation activities may overlap to some extent, to ensure the engagement process is adhered to and stakeholders have an opportunity to provide feedback on both the design and the implementation materials.

Timelines

Engagement on the 2022 Capacity Auction enhancements

The engagement on the 2022 capacity auction began in January, 2021 with a high-level work plan. The detailed design enhancements were first introduced in May, 2021, and presentations continued through to February, 2022 when a final design document was published.

In order to meet the implementation timelines of the annual auction, the implementation activities were introduced in the December, 2021 stakeholder engagement with the posting of the draft Market Manuals and Market Rule amendments. The intention of posting the drafts at this time was to seek early feedback from stakeholders in preparation for the Technical Panel cycle beginning in March, 2022.

Below is a timeline of the engagement of the 2022 capacity auction enhancements, including topics presented at each of the monthly engagement sessions.

Table 1: Timeline and Summary of 2022 Capacity Auction Formal Engagement

Month	Topic
January, 2021	Presented high-level work plan of the enhancements planned for the 2022 capacity auction
March, 2021	Discussed purpose and goals of planned capacity auction enhancements for 2022
May, 2021	• Began discussion on transition to a capacity qualification process (unforced capacity [UCAP]), including a general overview of the process, design principles and objectives. • Presented draft resource-specific UCAP calculation methodologies • Discussed establishing a minimum target capacity for future capacity auctions
June, 2021	Held resource-specific, working level meetings to discuss qualified capacity process in general and draft UCAP methodologies, with goal of collecting early stakeholder feedback, questions and concerns
July, 2021	• Reviewed stakeholder feedback from May meeting and June UCAP discussions, and provided updates to initial UCAP proposals • Presented proposal to expand participation to generator-backed capacity imports
August, 2021	Presented proposed updates to the capacity auction performance assessment framework which included: • Revised testing framework including performance de-rates • Implementing a charge equal to 2x the capacity charge in emergency conditions • Availability true-up mechanism
September, 2021	Brief update on next steps for 2022 capacity auction enhancements, including anticipated timing to post draft design document
October, 2021	• Draft design document published • Presented and discussed feedback received from the August stakeholder engagement • Provided overview of the 2022 Capacity Auction Enhancements draft design document, including updates to enhancement designs that were made as a result of stakeholder feedback and internal discussions • Discussed proposed plans and timelines to transition from enhancement design to implementation activities

Month	Topic
November, 2021	• Outlined updates made to design enhancement proposals as a result of stakeholder feedback received and better aligning the proposal with the objective of incenting availability at times of acute need. These updates included: ○ Penalty equal to 2x the capacity charge during emergency conditions revised to an augmented hourly availability charge equal to 10x the existing availability charge (inclusive of the non-performance factor), and applied to MWs not made available. Also extended this charge to apply during standby conditions for HDR resources. ○ Revised the implementation of performance adjustment factors (PAFs) beginning with the Dec. 2023 Auction instead of Dec. 2022. This proposal was later further revised to be implemented beginning with the Dec. 2024 Auction ○ Revised testing proposal to allow resources to self-schedule their capacity test within an IESO-determined 5-day testing window • Presented administrative enhancements for the 2022 capacity auction, which included zone group limits and point in time revisions
December, 2021	• Focus on implementation activities including high level timeline • Draft market rules and manuals presented to offer an early opportunity for stakeholder review and comment
February, 2022	• Updated design document published • Guidance document published to assist readers in understanding the changes made between the original draft design document and the updated version • Presented overview of key updates made to the design • Held discussion with stakeholders to clarify questions around design enhancements, as well as the IESO's intent and objectives • Provided overview of implementation activities and associated timelines • Discussed stakeholder feedback received on early drafts of the Market Rules and Market Manuals, and extended deadline for feedback to provide additional opportunity for stakeholder review and feedback on these documents

Additional Stakeholder Outreach to Support the Engagement

In addition to the formal stakeholder engagement, the IESO conducted more focussed, informal meetings with the broader stakeholder community as well as specifically with the hourly demand response (HDR) community. The purpose of these focussed outreach meetings was to work through the implementation details and provide clarity where needed.

The IESO also conducted one-on-one meetings with some members of the HDR community following the release of the final design document in February, 2022. The purpose of these meetings was to provide an additional opportunity for these stakeholders to provide feedback and seek clarity on the standby availability charge specifically, outside of the larger forum.

A timeline and summary of those meetings is below.

Table 2: Timeline and Summary of the 2022 Capacity Auction Outreach & Engagements

Date	Topic
March 4, 2022	Capacity Auction – Q&A session Session held to support stakeholders with any questions they had on the material presented at the February stakeholder engagement. Also provided an opportunity for stakeholders to engage on the draft Market Manuals and the Market Rule amendments.
Mar 7 – Mar 25, 2022	One-on-one outreach meetings with some members of the HDR community.
April 4, 2022	Follow-up discussion with HDR community on the implementation of the standby availability charge: • Both IESO and HDR community provided proposals for the magnitude of the charge • HDR community also requested cap on total penalties that a resource is exposed to in the auction.
April 22, 2022	Follow-up discussion with HDR community on the implementation of the standby availability charge: • Continued discussions on the magnitude of the charge and concerns from the HDR community
April 28, 2022	Follow-up with the HDR community on the implementation of the standby availability charge: • IESO presented a new proposal, including supporting calculations and rationale for the variables.

Stakeholder Feedback

Request for feedback was available after each monthly engagement meeting on the capacity auction enhancements. Stakeholders were invited to submit feedback following the engagement, and the IESO would review and respond, and walk-through key feedback at the formal engagement sessions that followed. All feedback received was posted and responded to by the IESO on the Resource Adequacy engagement web page.

The IESO considered all of the feedback received, and made revisions to its design proposals where appropriate. A summary of those changes is provided below.

Table 3: Summary of Changes to Design Due to Feedback

Design Element	Update	Rationale
Capacity Qualification - Application of the Performance Adjustment Factor	Performance Adjustment Factors (PAF) will not be applied in the capacity qualification process of the December 2022 Capacity Auction. PAFs for all resources in the December 2024 Auction will be based on their assessed performance from the Summer 2023 and Winter 2023/24 obligation periods	Based on feedback the IESO received, the proposal was revised to ensure that the PAFs are applied on a 'go-forward' basis and based on the new performance obligation and assessment framework of the 2022 Auction (i.e., based on assessed performance from the Summer 2023 and Winter 2023/24 obligation periods).
Capacity Qualification - UCAP methodology for generator-backed capacity imports	The IESO will require generator-backed capacity import resources to provide an accredited UCAP value from an external system/balancing authority as part of capacity qualification (with the exception of energy storage where the internal qualification methodology can be utilized).	After further discussion with neighbouring system operators, stakeholders, and accounting for internal resource constraints, the IESO made the decision to require an external resource to provide an accredited UCAP value from another system balancing authority. This design proposal was made based on the following considerations: • Using external accreditations helps ensure alignment between resource adequacy calculations (additions/reductions) between jurisdictions. • Qualifying an external resource without the equivalent, requisite and formatted data would be an administratively complex and time-consuming process for both the IESO and the external supplier. • Ultimately these resources will fulfill their capacity obligation in the market as imports which is a different participation framework than that of internal generation and load.
Performance Assessment Modifications - Capacity Testing	The initial design proposed giving all resources a day ahead notification for a capacity test. Under the new testing framework, resources will now be required to	The intent of the capacity test is to assess a resource's capability to provide its cleared ICAP. The new testing framework provides participants with a greater degree of

Design Element	Update	Rationale
	get scheduled to their cleared ICAP within a 5-day testing window. Hourly Demand Response (HDR) and Dispatchable Load Resources will be exempted from the Demand Response Bid Threshold for the testing window to allow them to submit bids to help ensure receipt of an activation. As this will be an 'in-market' activation, resources will not be eligible for any out-of-market payments.	flexibility in in demonstrating this capability. The IESO will continue to have the authority to test a resource's ability to comply with dispatch. This change was made as a result of stakeholder feedback and internal discussions that have taken place over several iterations of both the Demand Response Auction and the Capacity Auction.
Performance Assessment Modifications - Higher Charges at Times of Need	The initial design proposed a Capacity Charge equal to two months' availability payment for failure to deliver to the resource's cleared ICAP during Emergency Operating State Control Action activations. In place of this proposal, resources will be subject to an augmented (10x) availability charge assessment in the following conditions: 1) When an advisory notice has been issued for the declaration or potential declaration of an emergency operating state (Energy Emergency Alert level 1, 2 or 3) 2) When an advisory notice has been issued declaring an emergency operating state Note that the settlement of the 10x augmented availability charge will include the current availability charge assessment, if applicable (for more details refer to M.M 5.5). The combined charges result in a total non-performance factor of 10.	This design better aligns with the Capacity Auction product (availability at times of need) by applying performance charges that highlight the critical importance of capacity resources being available at times of acute system need. It was made as a result of stakeholder feedback and internal review
Standby charge	Introduction of a standby availability charge equal to 5x the availability charge and applied	Made as a result of stakeholder feedback and internal review, to better align the treatment of different

Design Element	Update	Rationale
	during peak months of an obligation period, on a maximum of 25 standby days per obligation period.	resource types and ensure fairness. Adding this charge to the standby condition is meant to account for HDR resources not being assessed for an availability de-rate during capacity qualification. Capping the application of the charge to 25 and applying only in peak months aligns with the treatment of dispatchable load resources who are qualified based on the top 200 hours of Ontario demand per season. The standby charge of 5x daily availability payments capped at 25 potential occurrences caps the charge at 125 days' availability payment for the unavailable capacity. This would be identical to the treatment of other resources, who would have the same availability de-rate applied during qualification for each of the ~125 business days in the obligation period. Examples of the impact of this change versus the original application of the standby availability charge, and a comparison to a Dispatchable Load resource, are provided in the appendix.

Appendix – Examples of Standby Availability Charge Application

All resources pay an availability charge, and the availability charge includes the application of a monthly non-performance factor (NPF). Consider an example where a 100MW resource only makes available 75% of its obligation during the availability window.

In lieu of an availability de-rate during qualification, an HDR resource would be subject to a standby availability charge. In the original proposal, the combination of the two charges (the availability charge and the standby availability charge) would have been equal to 10x the daily availability payment. The 10x was not in addition to the existing NPF value, rather, the multiplying factor applied to the standby availability charge was 10x less the existing NPF value. A revised proposal included a multiplier for the standby availability charge to be 5x (i.e., 7x less the existing NPF of 2.0 during peak months). Considering the median number of standby notices in 2021 and an average unavailability of 25%, application of the standby charge for the scenarios discussed above would have had the following impact in lieu of qualification as shown in the table below.

Table 4: Application of the Standby Charge Scenarios

Month	Non-Performance Factor (NPF)	Median no. Of Standby Notices / Unavailable days	Availability Charge (based on NPF)	Standby Availability Charge - Original Proposal (10x less NPF)	Standby Availability Charge - Revised Proposal (7x less NPF and only during peak months)
Jan	2.0	0	-	-	-
Feb	2.0	4	-$12,000.00	-$48,000.00	-$30,000.00
Mar	1.5	0	-	-	-
Apr	1	0	-	-	-
May	1	0	-	-	-
Jun	1.5	6	-$59,625.00	-$337,875.00	-
Jul	2.0	2	-$26,500.00	-$106,000.00	-$66,250.00
Aug	2.0	12	-$159,000.00	-$636,000.00	-$397,500.00
Sep	2.0	1	-$13,250.00	-$53,000.00	-$33,125.00
Oct	1	9	-$59,625.00	-$536,625.00	-
Nov	1	0	-	-	-
Dec	1.5	0	-	-	-
Total	-	**34**	**-$330,000.00**	**-$1,717,500.00**	**-$526,875.00**

Considering all resources are subject to the availability charge, it's more straightforward to consider the comparison of availability de-rate applied to another resource type with the application of the standby availability charge for HDR. One of the concerns that was raised during IESO's discussion with AEMA and AMPCO members was that the potential financial loss due to the standby availability charge applied to HDR resources may not be equivalent to the potential financial loss that Dispatchable Load (DL) resources are subject to when an availability de-rate factor is applied during

the capacity qualification process. This is due to the DL's de-rate being calculated based on 200 hours per commitment period, whereas there is no limit to the number of times a standby availability charge could be applied.

To address this concern, the IESO conducted an analysis to derive an equivalent number of standby days that would roughly equate to the 200 hours' methodology applied to DL along with a commensurate factor This analysis yielded a multiplier of 5x during peak months and the number of standby days for the standby availability charge to be capped at 25 days per season. Note that the standby availability charge, is in addition to the existing availability charge. The availability charge has a multiplier of 2x during peak months and is applicable to all resources.

The tables below summarize the implicit financial de-rate loss for an HDR and DL resource in a scenario where the cap is hit, reflecting the maximum possible exposure for an HDR resource and not necessarily the expected impact.

Table 5: Revised Standby Charge with Cap

Month	Non-Performance Factor (NPF)	Median no. of Standby Notices	Standby Availability Charge - Revised Proposal (5x less NPF)
Jan	5.0	25	-$187,500.00
Feb	5.0		
Mar	1.5	0	-
Apr	1	0	-
May	1	0	-
Jun	1.5	0	-
Jul	5.0	25	-$828,125.00
Aug	5.0		
Sep	5.0		
Oct	1	0	-
Nov	1	0	-
Dec	1.5	0	-
Total	-	**50**	**-$1,015,625.00**

<u>Dispatchable Load (DL) Resource</u>

Implicit Financial De-Rate Loss – Winter

25MW x $60 x 125 business days = **$ 187,500**

Implicit Financial De-Rate Loss – Summer

25MW x $265 x 125 business days = **$ 828,125**

Total reduction in revenue from De-Rates

$ 1,015,625

The above analysis shows that if the cap is hit, the treatment of the Standby Charge is exactly equal to the qualification of a DL resource