

Stakeholder Feedback and IESO Response

Capacity Auction Enhancements – September 20, 2023

Following the September 20, 2023, Capacity Auction engagement webinar, the IESO invited stakeholders to provide comments and feedback on the materials presented by October 4, 2023.

The IESO received written feedback submissions from:

- Advanced Energy Management Alliance on October 10, 2023
- Evolgen by Brookfield Renewable on October 10, 2023
- HQ Energy Marketing Inc. (“HQEM”) on October 13, 2023

The presentation materials and stakeholder feedback submissions have been posted on the [Capacity Auction Enhancements](#) engagement webpage for this engagement. Please reference the material for specific feedback as the below information provides excerpts and/or a summary only.

1) Draft Enhancements Objective Statement

Feedback	IESO Response
Stakeholders support the draft objective statement and generally agree that it reflects the value that the Capacity Auction contributes to the Resource Adequacy Framework and IESO-Administered markets.	The IESO will proceed with using this objective statement for future Capacity Auction Enhancements engagement discussions.
Stakeholders suggest including “valuing stakeholder and participant input” as a part of the objective statement.	The IESO continues to see value in stakeholder feedback which is used to inform IESO decision-making. This principle remains at the core of the IESO’s Engagement Principles which apply to each of the IESO’s engagements and activities within them.

2) 2023 Lessons Learned

Feedback	IESO Response
<p>Stakeholders indicate that ample time be provided to review materials, a holistic approach is used for proposed enhancements with consideration of how each one impacts the other. There was also a request that the IESO-decision making process is transparent and a suggestion that smaller technical working sessions be set up to further understand the operational impact of certain proposed enhancements.</p>	<p>The IESO adheres to its Engagement Principles and strives to ensure an open and transparent process for all stakeholders and communities. Timing for incorporating feedback varies by project and the IESO will continue to ensure stakeholders are aware of our engagement principles and have the opportunity to provide valuable input.</p> <p>Technical working sessions have been beneficial in previous Capacity Auction-related engagement sessions and could again be beneficial moving forward as we discuss future enhancements. The IESO agrees with the suggestion that the various enhancement suggestions should be considered holistically when determining which enhancements should be deemed a priority. The IESO will aim to identify enhancements with stakeholders that are interdependent with one another, so they are not explored in isolation.</p>

3) Recent Stakeholder Enhancement Suggestions

A) Review of audit parameters/process

Feedback	IESO Response
<p>In regard to improving CA participant and ratepayer outcomes, stakeholders indicate that the auditing process for HDR resources creates risk in the market by misaligning non-performance charges with aggregation performance, misaligning data submission requirements with data access timelines, and imposing non-industry standards of accuracy.</p> <p>Stakeholders indicate that MPs must incorporate the cost of responding to data audits, as well as the high level of risk that they pose, into their Capacity Auction bid prices. Stakeholders believe that this is not beneficial to the ratepayer, and the rules should better reflect the coordination that needs to occur between the aggregator, the LDC, and the IESO.</p>	<p>This feedback provides helpful context as we continue to explore this suggested enhancement further. Suggestions about the measurement and verification for virtual hourly demand response resources will be in scope for the Demand-Side Vision engagement.</p>

Feedback	IESO Response
Stakeholders recommend that auditing parameters and processes be flexible to accommodate for operational realities such as outage management.	
Stakeholders indicate that an inflexible auditing and testing process unfairly penalizes operators that need to manage competing obligations. Stakeholders also suggest that the current audit methodology can potentially over-commit resources that could otherwise perform adequately.	This IESO enhancement topic is in relation to the measurement data audit process for virtual HDR resources. The feedback provided seems to relate to the Capacity Auction testing process for all resources. The IESO is willing to explore how the current testing requirements can be more flexible while ensuring alignment with the Capacity Auction performance requirements and objective statement.

B) Review of reference technology that is the basis of the Reference Price

Feedback	IESO Response
In regard to improving CA participant and ratepayer outcomes, stakeholders indicate that this enhancement would improve resources' ability to compete with other IESO procurements.	A review of the reference technology that is the basis of the reference price will consider recommendations provided by Brattle during the previous demand curve parameters review and whether the reference technology represents the lowest cost of a new entry capacity resource that can be built in Ontario. Improving competition between the Capacity Auction and other IESO procurements is not the IESO's objective for the Resource Adequacy Framework.
In regard to the quantifiable benefits of this enhancement, stakeholders reference the Brattle report as means for the IESO in considering the reference price. This report states that the Reference Price should be high enough for a wide range of economic resources to participate competitively, including imports from neighbouring jurisdictions, and not exceed the estimated long-run cost of supply or Net CONE across regions in Ontario to mitigate potential excess procurement and	The IESO agrees that the recommendations provided by Brattle during the previous demand curve review should be considered in the upcoming review of the reference technology and reference price.

Feedback	IESO Response
enable pricing consistent with the anticipated cost of new generating capacity (on a long-run average basis).	

C) Understanding how import and virtual zonal limits are determined

Feedback	IESO Response
<p>In regard to improving CA participant and ratepayer outcomes, stakeholders believe that virtual zonal limits are restrictive and may be preventing resources from offering readily available capacity into the market. Stakeholders believe that aggregators and the IESO can work together to provide the IESO with the data it needs to eliminate any modeling uncertainty associated with virtual resources.</p> <p>Stakeholders indicate that this enhancement would improve both participant and ratepayer outcomes by enabling greater DER participation, particularly in capacity-constrained zones.</p> <p>Stakeholders also agree that it would be useful to understand how import limits (including import limits from external control areas) are determined.</p>	<p>If aggregators can provide additional contributor information for resources in the Niagara and West zones, the IESO can conduct additional analysis to determine if the virtual zonal limits in these two zones can change. To proceed with this analysis, the closest transmission system bus to where the contributor is electrically connected is a piece of information that aggregators can provide to us. This is basically the point of connection to the transmission system. If aggregators are able to provide this information, it is recommended that you distinguish between contributors that are already included in a resource in one of those zones and the incremental resources that could be added if the limits were increased. You can submit this information to the IESO using a modified recent contributor management spreadsheet.</p> <p>This analysis will take time to complete, therefore it is not feasible to make any change for the upcoming auction at the end of the month. The Capacity Auction and Stakeholder Engagement teams will be prepared to discuss this with stakeholders in the November 2023 stakeholder engagement session.</p>
<p>In regard to the quantifiable benefits of this enhancement, stakeholders indicated that the benefits would be quantifiable by incremental MWs offered into the market.</p> <p>Stakeholders also indicate that the benefits would generally be qualitative rather than quantitative, and that signaling where the physical constraints are located could lead to a cost-benefit analysis of relieving/relaxing those constraints. With respect to import</p>	<p>Increasing virtual zonal and import limits within a zone will not result in incremental MWs offered into the Capacity Auction if the overall zonal limit does not increase as well. Zonal and global limits for the Capacity Auction will continue to reflect the characteristics of the zone and the amount of capacity that can contribute to zonal and Ontario-wide resource adequacy.</p> <p>Import limits consider factors including: physical constraints of the intertie, transmission zonal constraints in the zone where the intertie is located, and the necessity to maintain a</p>

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<p>limits from external control areas (both local and global IESO-wide limits), stakeholders believe it is important to understand how those limits are established and ensure that they are not set in a manner that unduly restrict competition from external market participants.</p>	<p>balance of internal and imported resources that are available each year to support resource adequacy.</p> <p>The IESO will continue to investigate the quantitative and qualitative benefits of this suggested enhancement with stakeholders.</p>

D) Consider reducing dispatch test to one per obligation period

Feedback	IESO Response
<p>In regard to improving CA participant and ratepayer outcomes, stakeholders indicate that many participating resources have marginal costs that dramatically exceed the \$250/MWh dispatch test out-of-market payment price and as a result, demand response (DR) contributors often decline dispatch tests.</p> <p>Stakeholders indicate that as currently structured, the dispatch test dissuades DR contributors from participating in the Capacity Auction, does not provide an appropriate test of true conditions or incentives and incurs ratepayer costs. Stakeholders suggest that dispatch tests be limited to one per season or out-of-market payments be increased to properly test emergency conditions.</p> <p>Stakeholders also indicate their support for flexible rescheduling of dispatch tests.</p>	<p>The IESO is willing to investigate some of the dispatch-test related suggestions from stakeholders.</p> <p>Please note that the idea of incorporating flexible rescheduling of capacity auction dispatch tests is inconsistent with the purpose of the dispatch test, which is intended to test a Capacity Auction resource's ability to respond to IESO dispatch instructions with minimal notice.</p>

E) Evaluate the benefits of enabling monthly buyouts

Feedback	IESO Response
<p>Stakeholders indicate that this enhancement would lead to more MWs submitted into the auction and would better reflect MPs operational/business realities and risks.</p>	<p>The IESO previously conducted internal due diligence on monthly buyouts and determined the enhancement would fundamentally change the six-month product that the Capacity Auction is designed to procure. For</p>

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<p>Stakeholders also indicate that the IESO would reduce the need for administrative measures related to undelivered MWs and ratepayers would benefit from MPs not needing to factor limited buyout options into their bids.</p>	<p>this reason, it was not considered in scope of previous phases of auction enhancements.</p> <p>The IESO is committed to continuing to explore more flexible options to help participants manage their commitments. Any solution(s) would have to balance increasing participant flexibility while maintaining reliability.</p>
<p>In regard to the quantifiable benefits of this enhancement, stakeholders indicate that incremental MWs could be available to the IESO in months where resources are available to participate and did not have to buy out for the entire obligation period.</p>	<p>The IESO will continue to investigate the quantifiable benefits of commitment flexibility options with stakeholders.</p>

F) Review of 4-hour duration requirement for energy storage

Feedback	IESO Response
<p>In regard to improving CA participant and ratepayer outcomes, stakeholders indicate that defining the duration of the product that the IESO is looking to procure would allow resources to maximise their availability and would better incentivize good performance.</p> <p>Stakeholders also indicate that the current capacity qualification mechanism for storage resources incentivizes maximizing the energy and power ratings of participating storage facilities, and they do not support a minimum duration requirement for energy storage because it would quantitatively reduce the number of offers from storage resources/facilities.</p>	<p>The current requirement to participate in the Capacity Auction is that the storage resource be qualified and capable of delivering capacity for a 4-hour duration, as this is the maximum duration the resource will be expected to provide capacity for during an activation. For this reason, the IESO is not considering a change to this duration.</p> <p>Prospective participants will need to determine if their resources can meet that requirement prior to enrolling capacity resources.</p>

G) Benefits of enabling a weather-sensitive resource class and/or moving to four seasonal obligation periods to more accurately value HVAC load contributions

Feedback	IESO Response
<p>In regard to improving CA participant and ratepayer outcomes, some</p>	<p>For clarification, the scope of this question was intended to relate to HDR resources comprised of HVAC loads.</p>

Feedback	IESO Response
<p>stakeholders oppose the enhancement because it would pose a risk to reliability, increase ratepayer costs and be an administrative burden.</p>	<p>Changing the fundamental structure of the auction in this way would benefit only a small subset of eligible participants. Therefore, at this time the IESO feels this discussion of capabilities and requirements should be raised in the Demand-Side Vision engagement.</p>

H) Provide more flexibility options for participants to manage/adjust commitments

Feedback	IESO Response
<p>In regard to improving CA participant and ratepayer outcomes, stakeholders indicate that the ability to transfer obligations between resources would allow MPs to actively manage their risk portfolio instead of pricing that risk into their bids.</p> <p>Stakeholders also indicate that the IESO should allow capacity transfers between generating supply resources and HDR resources within the Capacity Auction to reduce capacity buyouts.</p>	<p>The IESO is willing to explore the benefits and details of these suggestions with stakeholders.</p> <p>Currently, resources can transfer obligations until two weeks prior to the obligation period, and only to the same resource type.</p> <p>Enabling transfer of obligations between resources within the obligation period would have significant impacts on the current design of the auction, IESO IT systems, and resource adequacy planning models.</p>
<p>In regard to the quantifiable benefits of this enhancement, stakeholders indicate that the IESO should expect to see fewer non-performance penalties and/or fewer buyouts if an aggregator can shift an obligation from a resource that is less likely to perform to a resource that is more likely to perform.</p>	<p>The IESO is willing to explore the benefits and details of these suggestions with stakeholders.</p>

I) Enable HDR participants to register more than one resource per zone

Feedback	IESO Response
<p>In regard to improving CA participant and ratepayer outcomes, stakeholders indicate that by allowing the HDR participants to register more than one resource per zone ensures that new and existing resources can be better</p>	<p>Additional stakeholder engagement is 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.</p>

Feedback	IESO Response
<p>managed and that their participation and contribution to the grid can be better assessed.</p>	
<p>In regard to the quantifiable benefits of this enhancement, stakeholders indicate that by lumping resources that act differently into one general resource bucket, the IESO is over procuring and is not able to fully capture the true value that the participants are providing to the system.</p>	<p>The IESO is interested in hearing from stakeholders how allowing further segmentation of HDR resource contributors could capture additional value in support of the Capacity Auction Enhancements objective statement.</p>

J) Additional review of in-day adjustment factor in baseline methodology

Feedback	IESO Response
<p>Stakeholders indicate that utilizing the IDA only serves to reduce the baseline in many cases and in the winter period the hours used to determine the adjustment are not hours of availability.</p>	<p>The IESO conducted a thorough review of its IDA methodology in 2021 and determined the baseline methodology was accurate, and no changes were required. As part of the Demand-Side Vision engagement, stakeholders may share new information for discussion in upcoming workshops.</p>

K) Reduce minimum resource requirement to less than 1 MW

Feedback	IESO Response
<p>In regard to improving CA participant and ratepayer outcomes, stakeholders indicate that the IESO's 1 MW minimum UCAP requirement limits competition, particularly in small zones of Ontario. Stakeholders indicate that this may reduce the number of aggregators who are able to compete for business in some zones.</p> <p>Other stakeholders indicate that they oppose this enhancement as it would be administratively burdensome, and aggregation mechanisms already allow participation for <1 MW UCAP resources.</p>	<p>The requirement for resources to be 1 MW or greater in size is an energy market participation requirement and changing this requirement is beyond the scope of the Capacity Auction Enhancements engagement.</p> <p>We suggest looking at other engagement initiatives that contemplate resource size, such as the Enabling Resources Program, which looks at enabling existing electricity resources to provide electricity system services in the renewed Ontario wholesale market that they cannot, or cannot fully, currently provide.</p>

Feedback	IESO Response
<p>In regard to the quantifiable benefits of this enhancement, stakeholders indicate that some resources may be in jeopardy of not participating in the future or may be forced to move to other aggregators in the event of a failed test.</p>	<p>We appreciate this quantifiable analysis; however, this is out of scope for the Capacity Auction and this engagement. The topic of enabling participation of resources less than 1 MW is a discussion better suited in the aforementioned engagement.</p>

L) Introduce performance-based incentives

Feedback	IESO Response
<p>In regard to improving CA participant and ratepayer outcomes, stakeholders indicate that they support further discussion to provide participants with more incentive, agency, and flexibility to follow market signals more closely.</p> <p>In regard to the quantifiable benefits of this enhancement, stakeholders indicate that competition and reliability could be enhanced significantly if dispatchable assets are incentivized to increase their performance and/or obligation by following market signals.</p>	<p>The IESO is interested in incenting performance from auction resources at the right time and will continue to review the performance assessment framework to determine if its features are contributing to reliability and cost-effectiveness as intended. Part of this review may include consideration to performance-based incentives.</p>

M) Utilize resource-specific data to determine EFORd for storage resources

Feedback	IESO Response
<p>Stakeholders indicate that they would generally support this enhancement and that this enhancement would benefit <i>Accuracy</i>.</p>	<p>Thank you for your feedback related to EFORd for storage resources.</p> <p>The IESO will continue to review available operational data from storage resources to determine when a resource-specific EFORd value can be calculated. Updates will be provided at future engagement sessions.</p> <p>Currently, a default EFORd of 5% is used for eligible storage resources.</p>

N) Include loss factors in UCAP methodology for demand response resources

Feedback	IESO Response
<p>In regard to improving CA participant and ratepayer outcomes, stakeholders indicate that the IESO not accounting for loss factors in the UCAP of DR resources results in capacity that the IESO is already procuring being under qualified in the auction, raising prices for consumers.</p>	<p>The IESO would like to continue discussions with stakeholders to better understand this enhancement suggestion.</p>

No feedback was received for items O (various suggestions that increase scope of contributor management process) and P (review of HDR standby trigger process).

General Comments/Feedback

Feedback	IESO Response
<p>Stakeholders recommend that the IESO standardize how internal generators and external generators can qualify their capacity and remove the requirement for internal generators to be non-committed “in whole or in part” to be eligible to participate in the Capacity Auction. Participants referenced this as being the industry norm in most capacity markets including NYISO, PJM, and ISO-NE.</p>	<p>The IESO is willing to explore the details and benefits of this suggestion with stakeholders.</p>
<p>Stakeholder support adding greater flexibility for managing PTIDs per offer and allowing more offer configurations for import resources.</p>	<p>We look forward to discussing this feedback in greater detail.</p>
<p>Stakeholders support harmonizing outage management designs and other market rules and mechanisms with external ISO to reduce regulatory overlap and burden.</p>	<p>The IESO continues to review the generator-backed import participation framework and consider improvements to ensure efficiency and alignment with the external jurisdiction where possible.</p>