

# Feedback Form

## Capacity Auction Enhancements – September 20, 2023

### Feedback Provided by:

Name: Katherine Hamilton

Title: Executive Director

Organization: Advanced Energy Management Alliance

Email: [REDACTED]

Date: October 10, 2023

To promote transparency, feedback submitted will be posted on the [Capacity Auction Enhancements](#) web page unless otherwise requested by the sender.

Following the September 20, 2023, engagement webinar, the Independent Electricity System Operator (IESO) is seeking feedback on a draft objective statement, lessons learned from the previous Capacity Auction Enhancements engagement, and recent stakeholder enhancement suggestions. The webinar presentation and recording can be accessed from the [engagement webpage](#).

**Please submit feedback to [engagement@ieso.ca](mailto:engagement@ieso.ca) by October 4, 2023.** If you wish to provide confidential feedback, please submit as a separate document, marked "Confidential". Otherwise, to promote transparency, feedback that is not marked "Confidential" will be posted on the engagement webpage.

## 1) Draft Enhancements Objective Statement

Question	Stakeholder Feedback
Does the statement reflect the value that the Capacity Auction contributes to the <a href="#">Resource Adequacy Framework</a> and IESO-Administered Markets?	Yes, the objective reflects the value that the Capacity Auction contributes to the Resource Adequacy Framework and IESO-Administered Markets.
Will the objective make clear what future enhancements should be prioritized and how they can contribute to the Capacity Auction's success?	

## 2) 2023 Lessons Learned

Question	Stakeholder Feedback
Do stakeholders have any other lessons learned from the 2023 Enhancements process? If so please list them and elaborate.	<p>The IESO needs to provide ample time for stakeholders to review materials and understand implications of enhancements. We recommend that the IESO take a holistic approach to understanding how proposed enhancements would impact one another and the overall experience of Capacity Market Participants, instead of looking at each enhancement on its own. Finally, it is imperative that the IESO create some mechanism for accountability to ensure any promises made to stakeholders during the engagement process are actioned in a timely manner.</p> <p>We supported the smaller, more technical working sessions that allowed stakeholders and the IESO to discuss in more detail the operational impact of the proposed enhancements.</p>

### 3) Recent Stakeholder Enhancement Suggestions

#### A) Review of audit parameters/process

Question	Stakeholder Feedback
How would this enhancement improve CA participant and ratepayer outcomes?	<p>The current auditing process for HDR resources creates unnecessary risk in the market for little marginal benefit by (1) misaligning non-performance charges with aggregation performance by not prorating penalties based on the portion of the aggregation that underperformed, (2) misaligning data submission requirements with data access timelines preventing aggregators to fully validate submitted data, and (3) by imposing non-industry standards of accuracy which exacerbate the risk of penalties that are assessed due to the current data submission requirements and penalty structure. Risk that arises from these administrative constructs are generally outside of a market participant's control and therefore not incentivizing improved performance. Therefore they are simply driving inefficient outcomes in the market. There are cost-effective MWs that would otherwise participate in the capacity auction absent these rules, and current capacity market participants must factor into their bids premiums to account for the potential downside risk associated with these constructs. Appropriately balancing audit performance with non-performance penalties would reduce the risk to market participants therefore lowering the cost to participate in the auction and therefore costs to consumers, while not jeopardizing or disincentivizing performance.</p>

Question	Stakeholder Feedback
<p>Would the benefits of this enhancement be quantifiable (e.g., improved resource performance, reliability, ratepayer value, etc.)? If so, please elaborate.</p>	<p>Yes. We expect that if these rules were to change, there would be increased participation and competition in the auction as the rules better align with consumers' risk tolerance. Currently market participants have to incorporate the high cost of responding to data audits, as well as the incredibly high level of risk that they pose, into their Capacity Auction bid prices. This drives the cost of procuring DR MW up, and is less beneficial to the ratepayer.</p> <p>There are significant costs incurred by the IESO to implement the current audit rules. The IESO has spent a large quantity of time on settlements due to these rules. If the rules better reflected the actual coordination that needs to occur between the aggregator, the LDC, and the IESO, much of this staff time could be saved. As one example, the most recent data audit conducted under the existing data audit rules has taken over 3 years, required the involvement of at least 4 IESO teams, and has required the IESO to hire external legal support.</p> <p>The changes suggested to the data audit process would have no impact on resource performance, would improve ratepayer value, and free up resources at the IESO to focus on implementing other improvements.</p>

Question	Stakeholder Feedback
<p>Please indicate and elaborate on which of the following categories best describes how this change would enhance the Capacity Auction: <i>competition, reliability, transparency, accessibility, administrative efficiency, resource performance, resource diversity, accuracy, general/other.</i></p>	<p>Competition: Balancing performance and penalties will encourage resources to participate in the auction by better aligning market risk with the risk tolerance of customers.</p> <p>Accessibility: Resources that are not willing to accept the current level of administrative risk associated with the current rules will be able to participate in the auction</p> <p>Administrative Efficiency: IESO will spend less time on settlements if participants do not need to reconcile unreasonable audit requirements with resource performance</p> <p>Resource Diversity: Resources classes that do not participate today due to audit risk may be able to participate with audit rules that better capture performance.</p>

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

Question	Stakeholder Feedback
How would this enhancement improve CA participant and ratepayer outcomes?	This would improve the resources ability to compete with the other IESO procurements that are going on.
Would the benefits of this enhancement be quantifiable (e.g., improved resource performance, reliability, ratepayer value, etc.)? If so, please elaborate.	<p>As highlighted in the Expedited Long-Term RFP the real costs are as follows: The weighted average price of all Storage Category projects is \$881.09/MW Business Day. The weighted average price of all Non-Storage Category projects is \$1,093.22/MW Business Day.</p> <p>As Referenced in the Brattle report the Reference Price should: Be high enough for a wide range of economic resources to participate competitively, including imports from neighbouring jurisdictions, not exceed the estimated long-run cost of supply or Net CONE across regions in Ontario to mitigate potential excess procurement and enable pricing consistent with the anticipated cost of new generating capacity (on a long-run average basis)</p>
Please indicate and elaborate on which of the following categories best describes how this change would enhance the Capacity Auction: <i>competition, reliability, transparency, accessibility, administrative efficiency, resource performance, resource diversity, accuracy, general/other.</i>	

### C) Understanding how import and virtual zonal limits are determined

Question	Stakeholder Feedback
<p>How would this enhancement improve CA participant and ratepayer outcomes?</p>	<p>AEMA believes that needlessly restrictive virtual zonal limits may be preventing resources from offering readily available capacity into the market.</p> <p>By having a more granular understanding of how these limits are set, we are confident that aggregators and the IESO can work together to provide IESO with the data it needs to eliminate any modeling uncertainty associated with virtual resources.</p> <p>This would improve both participant and ratepayer outcomes by enabling greater DER participation (a low-cost resource), particularly in capacity-constrained zones.</p>
<p>Would the benefits of this enhancement be quantifiable (e.g., improved resource performance, reliability, ratepayer value, etc.)? If so, please elaborate.</p>	<p>Yes. Depending on how much additional capacity is enabled from virtual resources, the benefits would be quantifiable in terms of incremental MWs offered into the market, which translates directly into dollars saved versus more expensive capacity alternatives.</p> <p>In other words, improved reliability and greater ratepayer value.</p>

Question	Stakeholder Feedback
<p>Please indicate and elaborate on which of the following categories best describes how this change would enhance the Capacity Auction: <i>competition, reliability, transparency, accessibility, administrative efficiency, resource performance, resource diversity, accuracy, general/other.</i></p>	<p>Competition: by working together to reduce or eliminate virtual zonal limits, virtual resources could compete on a more even playing field without a potentially unnecessary additional hurdle of being constrained by the virtual limit.</p> <p>Reliability: more capacity offered into the market in constrained zones could improve system reliability.</p> <p>Transparency: by providing the full granular details of how these limits are set, the IESO would meaningfully advance transparency. This would facilitate far more effective collaboration on how we can address the underlying challenge that leads to these limits being set, and may open a pathway to their elimination.</p> <p>Administrative efficiency: the potential elimination of virtual zonal limits would alleviate the administrative burden of setting the limits in the first place.</p> <p>Resource performance: virtual resources would be further enabled to perform to their full potential (e.g. resources wouldn't have to hold back significant amounts of capacity from the market because of virtual zonal limits).</p> <p>Accuracy: we are confident that any potential operational modeling inaccuracies that currently result from virtual resources can be compensated for by providing the IESO with readily-available resource data. As a result, overall modeling accuracy could actually be improved <u>and</u> virtual limits eliminated.</p>



## D) Consider reducing dispatch test to one per obligation period

Question	Stakeholder Feedback
<p>How would this enhancement improve CA participant and ratepayer outcomes?</p>	<p>As it currently stands, the IESO has the most testing of any demand response regime in North America. The testing conducted in the Dispatch Tests pays performing resources \$250/MWh for their test. Many of these resources have marginal costs that dramatically exceed this price. As a result, demand response contributors often decline dispatch tests. As currently structured, the dispatch test serves to 1) dissuade DR contributors from participating in the program, 2) do not provide an appropriate test of true conditions or incentives and 3) incur ratepayer costs.</p> <p>These tests should be limited to once per season or should have their values increased to properly test emergency conditions.</p>
<p>Would the benefits of this enhancement be quantifiable (e.g., improved resource performance, reliability, ratepayer value, etc.)? If so, please elaborate.</p>	<p>IESO understanding of true deliverability during emergency conditions should be a quantifiable benefit. How resources perform in conditions that mimic a true emergency is important.</p>
<p>Please indicate and elaborate on which of the following categories best describes how this change would enhance the Capacity Auction: <i>competition, reliability, transparency, accessibility, administrative efficiency, resource performance, resource diversity, accuracy, general/other.</i></p>	<p>Reliability benefits would be increased if the IESO conducted the dispatch test using emergency incentives (Offer price minus HOEP). This could be beneficial for all parties. By limiting the test to just once per season at one hour, the total rate payer impact would be neutral.</p>

## E) Evaluate the benefits of enabling monthly buyouts

Question	Stakeholder Feedback
<p>How would this enhancement improve CA participant and ratepayer outcomes?</p>	<p>Market Participants need to factor in the risk of the limited buy-out options available to them (transferring capacity ahead of the season or buy-out of a partial or full capacity obligation for the entire obligation period) when they submit their initial bids, which could increase bid costs if a participant believes there is any risk that a portion of its aggregation could be unavailable. This is compounded by the limitation of a single aggregation per capacity zone, see section below, and could potentially drive up capacity market prices. Adding flexibility into the market would allow a market participant to actively manage this risk and more accurately reflect a portfolio’s expected performance in the market, while not overly penalizing an entire aggregation by requiring it to exit the market for longer than needed, reducing costs and improving reliability. Market participants would be able to more accurately shape their obligations to their expected performance to account for monthly variations in their portfolios (due to maintenance, production schedules, etc.), fully utilizing the MWs available like they are able to do in other wholesale markets in North America.</p> <p>Additionally, this would help Capacity Auction participants account for unexpected outages or technology issues that are not captured by the outage process for HDRs. For example, if a large contributor has an unexpected interruption in business that would prevent them from curtailing for long duration of time buying out of those MW for a single month would be more advantageous to both the IESO, ratepayers, and the contributor than having to buy out for a full obligation period.</p>
<p>Would the benefits of this enhancement be quantifiable (e.g., improved resource performance, reliability, ratepayer value, etc.)? If so, please elaborate.</p>	<p>Yes. Incremental MWs should become available to IESO in months where resources had to buyout across the entire capability period but are available to participate.</p>

Question	Stakeholder Feedback
<p>Please indicate and elaborate on which of the following categories best describes how this change would enhance the Capacity Auction: <i>competition, reliability, transparency, accessibility, administrative efficiency, resource performance, resource diversity, accuracy, general/other.</i></p>	<p>Transparency &amp; Accuracy: Market Participants would be able to shape their obligations monthly such that they can provide their full value in each granular period and IESO would have a greater understanding of the resource available.</p> <p>Reliability: IESO would be able to take advantage of resources that have to shed obligations under the current framework in months that they would otherwise be available.</p>

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

Question	Stakeholder Feedback
<p>How would this enhancement improve CA participant and ratepayer outcomes?</p>	<p>By defining the product that the IESO is looking to procure, whether its a 2 hour or 4 hour product, this would allow for the for resources to maximise their availability and bettr incent their performance.</p>
<p>Would the benefits of this enhancement be quantifiable (e.g., improved resource performance, reliability, ratepayer value, etc.)? If so, please elaborate.</p>	<p>Yes the benefits would be quantifiable as the IESO would be able to have resources on the system that are meeting their realistic needs.</p>
<p>Please indicate and elaborate on which of the following categories best describes how this change would enhance the Capacity Auction: <i>competition, reliability, transparency, accessibility, administrative efficiency, resource performance, resource diversity, accuracy, general/other.</i></p>	<p>This would best enhance the capacity Auction be ensuring strong and maximum resource performance.</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

Question	Stakeholder Feedback
How would this enhancement improve CA participant and ratepayer outcomes?	There are a large number of resources in Voltus' portfolio that are weather-sensitive. With the update to the IESO's directions around Capacity Qualification to be at ambient conditions and not peak conditions, the AEMA and its members are not longer able to offer these resources into the IESO Capacity Auction. This means that 25-50 MW may be unable to clear the auction starting May 1, 2024. These resources are low cost and help manage energy and capacity issues on the IESO's system. Without these resources participating in the Capacity Auction, the IESO will need to develop additional generation, which will increase rate payer costs and increase costs to some major loads in Ontario.
Would the benefits of this enhancement be quantifiable (e.g., improved resource performance, reliability, ratepayer value, etc.)? If so, please elaborate.	The benefit of this enhancement is quantifiable, as aggregators have a strong understanding of weather-sensitive loads within their portfolio. AEMA is currently aware of up to 50 MW of Capacity that may be at risk because updated rules do not allow for weather-sensitive resources.
Please indicate and elaborate on which of the following categories best describes how this change would enhance the Capacity Auction: <i>competition, reliability, transparency, accessibility, administrative efficiency, resource performance, resource diversity, accuracy, general/other.</i>	This change will assist with competition, resource diversity and reliability in Ontario.

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

Question	Stakeholder Feedback
<p>How would this enhancement improve CA participant and ratepayer outcomes?</p>	<p>Market Participants cannot transfer capacity obligations between capacity resources within seasons even if that transfer would allow a resource that is less likely it will be able to perform to shift their obligation to a resource that is more likely it is able to perform. The ability to transfer obligations between resources would allow market participants to actively manage their risk instead of price that risk into their capacity market bid, protecting the market from underperformance and allow resources that are willing and able to take on an obligation to do so.</p> <p>Similarly, IESO should allow capacity transfers between generating supply resources and HDR resources within the capacity auction. If a MW of supply has equivalent reliability value and clears against the same constraint within the auction, then a Market Participant should be allowed to transfer that obligation across all supply resources post auction. This would increase the pool of resources that a resource that wants to transfer an obligation has access to, increasing the likelihood that a resource successfully transfers their obligation, maintaining the same level of system reliability by reducing underperformance or capacity buy-outs</p>
<p>Would the benefits of this enhancement be quantifiable (e.g., improved resource performance, reliability, ratepayer value, etc.)? If so, please elaborate.</p>	<p>Yes. The IESO should expect to see fewer nonperformance penalties and/or fewer buy-outs 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>

Question	Stakeholder Feedback
<p>Please indicate and elaborate on which of the following categories best describes how this change would enhance the Capacity Auction: <i>competition, reliability, transparency, accessibility, administrative efficiency, resource performance, resource diversity, accuracy, general/other.</i></p>	<p>Reliability: Resources that are most willing and able to take on capacity obligations can do so, and respond to a dynamic environment within a capacity obligation period.</p> <p>Resource Performance: Obligations from the capacity market will end up in the hands of resources that are most likely and willing to perform, which will decrease nonperformance penalties.</p> <p>Accuracy: By allowing more flexibility to right-size the commitment in the Capacity Auction, this allows for increased accuracy of market bids and give the IESO a clarity on the size of the resources available in any given hour.</p>

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

Question	Stakeholder Feedback
<p>How would this enhancement improve CA participant and ratepayer outcomes?</p>	<p>By allowing the HDR Participants to register more than one resource per zone this ensures that new and existing resources can be better managed and that there participation and contribution to the grid can be better assessed.</p>
<p>Would the benefits of this enhancement be quantifiable (e.g., improved resource performance, reliability, ratepayer value, etc.)? If so, please elaborate.</p>	<p>By lumping resources that act differently into one general resource bucket the IESO is overprocureing and is not able to fully capture the true value that the participants are providing to the system.</p>
<p>Please indicate and elaborate on which of the following categories best describes how this change would enhance the Capacity Auction: <i>competition, reliability, transparency, accessibility, administrative efficiency, resource performance, resource diversity, accuracy, general/other.</i></p>	<p>This would help address the concerns around reliability, resource performance, resource diversity and accuracy. By enabling multiple aggregations you are able to separate the weather sensitive loads from those that are not ensuing accurate measurement of baselines and performance. To meanure large C&amp;I's, Energy Storage and small commercial under one resource with one combine baseline causes significant inaccuracies.</p>

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

Question	Stakeholder Feedback
How would this enhancement improve CA participant and ratepayer outcomes?	
Would the benefits of this enhancement be quantifiable (e.g., improved resource performance, reliability, ratepayer value, etc.)? If so, please elaborate.	
Please indicate and elaborate on which of the following categories best describes how this change would enhance the Capacity Auction: <i>competition, reliability, transparency, accessibility, administrative efficiency, resource performance, resource diversity, accuracy, general/other.</i>	Resource Performance and Measurement Accuracy. 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. IDA should only be used where the participant has load that is weather-dependent. Most manufacturing facilities do not have this characteristic.

## K) Reduce minimum resource requirement to less than 1 MW

Question	Stakeholder Feedback
How would this enhancement improve CA participant and ratepayer outcomes?	At present, that IESO's limitation to resources that are only > 1 MW of UCAP limits competition, particularly in small zones in the province. This may prohibit resources that have an ICAP of 1 MW or above, but a performance factor of less than 100% from participating in future auctions, which will limit competition in Ontario and reduce the number of aggregators who are able to compete for business in some zone.

Question	Stakeholder Feedback
<p>Would the benefits of this enhancement be quantifiable (e.g., improved resource performance, reliability, ratepayer value, etc.)? If so, please elaborate.</p>	<p>The benefit of this is quantifiable. AEMA counts 19 resources that cleared the IESO Capacity Auction in 2023 that were 2 MW or less in size for more than 30 MW of Capacity. These resources may be in jeopardy of not participating in the future or being forced to move to other aggregators in the event of a failed test. The impact will be less available capacity to the IESO and reduced competition, which could lead to increased pricing.</p>
<p>Please indicate and elaborate on which of the following categories best describes how this change would enhance the Capacity Auction: <i>competition, reliability, transparency, accessibility, administrative efficiency, resource performance, resource diversity, accuracy, general/other.</i></p>	<p>Improvements to Competition and Reliability as outlined above.</p>

### L) Introduce performance-based incentives

Question	Stakeholder Feedback
<p>How would this enhancement improve CA participant and ratepayer outcomes?</p>	
<p>Would the benefits of this enhancement be quantifiable (e.g., improved resource performance, reliability, ratepayer value, etc.)? If so, please elaborate.</p>	
<p>Please indicate and elaborate on which of the following categories best describes how this change would enhance the Capacity Auction: <i>competition, reliability, transparency, accessibility, administrative efficiency, resource performance, resource diversity, accuracy, general/other.</i></p>	

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



Question	Stakeholder Feedback
How would this enhancement improve CA participant and ratepayer outcomes?	
Would the benefits of this enhancement be quantifiable (e.g., improved resource performance, reliability, ratepayer value, etc.)? If so, please elaborate.	
Please indicate and elaborate on which of the following categories best describes how this change would enhance the Capacity Auction: <i>competition, reliability, transparency, accessibility, administrative efficiency, resource performance, resource diversity, accuracy, general/other.</i>	

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

Question	Stakeholder Feedback
How would this enhancement improve CA participant and ratepayer outcomes?	The IESO remains the only ISO in North America that does not account for loss factors in the UCAP of Demand Response resources. This results in capacity that the IESO is already procuring being under qualified in the auction, raising prices for consumers.
Would the benefits of this enhancement be quantifiable (e.g., improved resource performance, reliability, ratepayer value, etc.)? If so, please elaborate.	Rate payer value from the Capacity auction will be increased as demand resources will be qualified for additional capacity, reducing prices and increasing qualified capacity. As much as 5% of additional demand response capacity is not being accounted for within the current mechanism, which amounts to almost 40 MW of capacity being left on the table.

Question	Stakeholder Feedback
Please indicate and elaborate on which of the following categories best describes how this change would enhance the Capacity Auction: <i>competition, reliability, transparency, accessibility, administrative efficiency, resource performance, resource diversity, accuracy, general/other.</i>	Improvements to Competition, Reliability, Resource Performance, and Accuracy.

**O) Various suggestions that increase scope of contributor management process**

Question	Stakeholder Feedback
How would this enhancement improve CA participant and ratepayer outcomes?	
Would the benefits of this enhancement be quantifiable (e.g., improved resource performance, reliability, ratepayer value, etc.)? If so, please elaborate.	
Please indicate and elaborate on which of the following categories best describes how this change would enhance the Capacity Auction: <i>competition, reliability, transparency, accessibility, administrative efficiency, resource performance, resource diversity, accuracy, general/other.</i>	

**P) Review of HDR standby trigger process**

Question	Stakeholder Feedback
How would this enhancement improve CA participant and ratepayer outcomes?	
Would the benefits of this enhancement be quantifiable (e.g., improved resource performance, reliability, ratepayer value, etc.)? If so, please elaborate.	

Question	Stakeholder Feedback
<p>Please indicate and elaborate on which of the following categories best describes how this change would enhance the Capacity Auction: <i>competition, reliability, transparency, accessibility, administrative efficiency, resource performance, resource diversity, accuracy, general/other.</i></p>	

## General Comments/Feedback

Advanced Energy Management Alliance (“AEMA”) is a North American trade association whose members include distributed energy resources, demand response (“DR”), and advanced energy management service and technology providers, as well as some of Ontario’s largest consumer resources, who support advanced energy management solutions due to the electricity cost savings those solutions provide to their businesses. The comments herein represent those of the organization, not those of any individual member.