

# Stakeholder Feedback and IESO Response

## Capacity Auction – August 26, 2021 Webinar

Following the August 26, 2021 Resource Adequacy engagement webinar, the Independent Electricity System Operator (IESO) invited stakeholders to provide feedback on the materials presented.

The IESO received feedback from the following stakeholders on the information guide:

- Advanced Energy Management Alliance
- APPrO
- Atlantic Power
- Capital Power Corporation
- Consortium of Renewable Generators, Energy Storage Providers and the Canadian Renewable Energy Association
- Demand Power Group Inc.
- Energy Storage Canada
- Evolgen by Brookfield Renewable
- Market Surveillance Panel
- Northland Power Inc.
- Ontario Energy Association
- Ontario Power Generation
- Ontario Waterpower Association
- Power Workers' Union

This feedback has been posted on the [engagement webpage](#).

## Note on Feedback Summary and IESO Response

The IESO appreciates the feedback received from stakeholders. The table below responds to the feedback received and is organized by each topic. This document is provided for information purposes only. It does not constitute, nor should it be construed to constitute, legal advice or a guarantee, offer, representation or warranty on behalf of the IESO.

## Test to Capability for All Resources

Feedback	IESO Response
<p>Please clarify if resources are tested to cleared capacity or ICAP.</p>	<p>For a capacity test activation, resources will be assessed against their “Cleared ICAP”.</p>
<p>After a test is requested, will resources have the flexibility to chose which hours to demonstrate their ability to produce their Cleared ICAP or will the IESO dictate the hours? Other ISOs permit resources to schedule the timing of their capacity check test within the allotted obligation hours on a selected day.</p>	<p>Aside from providing advance notice ahead of a testing day, IESO will continue to conduct test activations as it has done in the past.</p>
<p>If the IESO requests 4 hours of energy from 15:00 – 19:00 at 100 MW, and a facility instead provides 100 MW from 15:15 –19:15, will the IESO view this as a successful capacity check test?</p>	<p>Further detail would be required to assess this example. The IESO has proposed the introduction of a 5% deadband in the assessment of cleared ICAP. Tests are assessed on a 5-minute interval (rather than hourly) basis. Aside from the introduction of a 5% threshold and the cleared ICAP assessment, the performance assessment for capacity testing is unchanged.</p>
<p>The ability to request a second test is supported. Can the IESO please specify what constitutes “truly unforeseen or extraordinary circumstances”, that would enable a resource to request a second capacity test activation?</p>	<p>Participants will not have the ability to request a re-test. The IESO has clarified that it has the ability to test up to twice per commitment period and would plan to re-test where a resource was unable to perform. However, due to data submission and assessment timelines, this may not be possible for virtual resources.</p>

## Changes to Thresholds

Feedback	IESO Response
Some stakeholders expressed concern regarding reducing the performance threshold for HDRs from 20% to 10%, while others questioned the fairness of HDR resources having a greater threshold compared to the 5% threshold for all other resources.	The different performance thresholds between HDR (10%) and other resources (5%) is to recognize an inherent degree of uncertainty in how HDR performance is measured, comparing actual load against an estimate of load in the absence of an activation (a "baseline"). The changes to performance thresholds included in these proposed modifications aims to bring greater alignment in how performance of different capacity resource types are assessed while also recognizing their unique characteristics.
Thresholds should be reviewed annually.	The IESO will review thresholds as required to ensure the assessment framework is appropriate and effective.
Accurate measurement of HDR resource is required	The IESO is currently completing a review of the of the methodology used to assess HDR resource performance. Preliminary results have shown that the current baseline methodology is performing well against alternatives. IESO is conducting additional analysis that it plans to present in November.
Perhaps the fairer solution is to increase the thresholds of other resource types to 20% instead.	The objective of the performance assessment modifications is to incent improved performance. Significantly relaxing thresholds for resources would not contribute to this objective. Rather, the IESO is introducing a moderate threshold allowance while testing to a higher performance standard (cleared ICAP).

## Future De-Rates

Feedback	IESO Response
<p>There is a concern that aggregators will be misrepresented if they are being de-rated by assets that are no longer in the portfolio. Similarly, participants who upgrade their resources should not face a future de-rate. Future de-rates create barriers for the HDR resource to procure new reliable contributors because new contributors will lack incentives to join a de-rated resource and/or reliable contributors may flock to better performing resources.</p> <p>Can IESO provide an example of how a virtual HDR resource with multiple contributors will be de-rated with the Performance Adjustment Factor?</p>	<p>The risk of managing the performance of individual contributors will continue to be the responsibility of the aggregator. The IESO will continue to qualify the capacity of the <i>resource</i>.</p> <p>An example of how the PAF could be calculated and factored into the UCAP calculation for an HDR resource will be available in the Capacity Qualification section of the design document to be posted on the Resource Adequacy <a href="#">engagement webpage</a>.</p>
<p>Penalties should be applied within the same period, otherwise there is insufficient proximity between the act and penalty.</p>	<p>Settlement charges are assessed based on performance within an obligation period. The IESO believes qualifying capacity using historical data (performance, availability, production etc) is a fair and reasonable approach that also accounts for resource characteristics.</p>
<p>The IESO has mechanisms to investigate activity if a resource is regularly incapable of meeting it's capacity obligation.</p>	<p>None of the proposed performance assessment or qualification procedures replaces the IESO's compliance framework to investigate potential breaches of the market rules.</p>

Feedback	IESO Response
<p>In the August 26 presentation, it was proposed that resources will be qualified with BOTH a derate factor and historical capacity test activation performance. Will the qualification of HDR resources be impacted by both a capacity test activation performance and a derate factor?</p>	<p>For clarification, the PAF is a measure of performance; it is a means of adjusting the resource's installed capacity, if necessary, in accordance with its demonstrated capability during capacity test activation. As discussed previously, the participation model of HDR (standby, etc) means there is a lack of data on which to qualify historic real-time availability. This means that the UCAP for HDRs will need to be based solely on past performance; all other resources will be qualified pursuant to resource-specific methodologies.</p>
<p>Can the IESO clarify that if a forced outage occurs for a generator (i.e. not predictable) during a capacity check test or emergency activation that this would not result in any financial clawbacks/penalties? Issuing a penalty/claw back would appear to double count the purpose of using EFORd in the calculation of UCAP.</p>	<p>A capacity resource that is unable to meet performance criteria during a capacity test and/or EOSCA activation will be subject to a capacity charge. The EFORd calculation will continue to apply to UCAP calculations pursuant to resource-specific methodologies.</p>
<p>We understood the capacity testing requirement to be a qualification step and normal course for getting assigned a UCAP value for a upcoming capacity commitment period.</p>	<p>Under the Auction design capacity test activations are not performed as part of the qualification process, rather they are performed during the obligation period in order to confirm that a resource's ICAP, as cleared in the auction, can be delivered. Results from a capacity test activation will be used for qualification in a future capacity auction.</p>
<p>Please outline the steps a resource could take to reset its de-rated capacity back to the initial value.</p>	<p>A resource can improve or remove their PAF each year by delivering on their cleared ICAP when tested. If a resource is able to deliver within the threshold when tested they will have a PAF of 0 applied to next year's auction.</p>

Feedback	IESO Response
<p>In the example provided, a resource with a 100 MW ICAP fails its capacity check test in year 1 by injecting 94 MW. Slide 22 of the deck then identifies that the resource’s new ICAP value for year 2 is 94 MW. Would the capacity check test in year 2 assess the resource against the 94 MW ICAP or the original 100 MW ICAP? Additionally, which ICAP value will the year 2 capacity check tests’ 5% (10% for HDRs) threshold be based on (i.e., will the resource be required to deliver 89.0 MW or 89.3 MW)?</p>	<p>To clarify, a market participant will submit an ICAP value for a resource. This capacity will be qualified by the IESO resulting in a UCAP value that the market participant is then eligible to offer in the auction. If the market participant clears the auction, they will then have a Cleared UCAP and a corresponding Cleared ICAP (which may be equal to or lower than the ICAP that was submitted).</p> <p>Capacity test activations will always be assessed against the Cleared ICAP for that obligation period.</p> <p>In the example on page 22 of the presentation, if the resource cleared its full UCAP of 84.6MW in the auction, then its Cleared ICAP would be <math>\text{Cleared UCAP}/(1-\text{PAF}) = 84.6\text{MW}/(1-0.06) = 90\text{MW}</math>. The resource would be assessed against the 90MW Cleared ICAP.</p>

## Common Notification

Feedback	IESO Response
<p>Stakeholders indicated support for the day-ahead testing notification for all resources (and not sooner)</p>	<p>The IESO appreciates this feedback.</p>
<p>The current notification period for a capacity test under existing contracts for non-quick start units is 10 days. We recommend that if a consistent notification period is going to be applied that it be based upon 10 days’ notice. Day-ahead notice is not sufficient for a non-quick start resource (i.e. Co-gen plant that must coordinate with operations of customers).</p>	<p>The objective of this modification is to provide additional advance notice to participants while also providing confidence of a resource’s ability to perform in actual market conditions.</p>

Feedback	IESO Response
<p>Under an EOSCA, will notifications follow the same procedure as during non-emergency times (i.e. day-ahead notification required to activate)?</p>	<p>The common notification for all capacity resources applies only for capacity test activations. The IESO is not proposing any other changes to current notification procedures at this time. As with all activations, EOSCA will need to account for resource-specific scheduling requirements and timelines.</p>

## Incenting Performance at the Right Time

Feedback	IESO Response
<p>The IESO should consider a positive performance-based incentive mechanism similar to what is in place in ISO-NE. A positive performance-based incentive (i.e. voluntary over-delivery when system need is present) would enable market signals to encourage generators to offer, thus increasing competition.</p>	<p>The IESO plans to review the performance assessment framework regularly and other features of the Capacity Auction to determine if they contribute to reliability and cost-effectiveness. The IESO may consider this proposed mechanism with stakeholders at some point in the future (i.e. post 2022).</p>
<p>In an emergency event, it is crucial to secure all possible MWs, but the significant two-month penalty eliminates incentive for resources to remain in market if they are forecasted to be below the dead band.</p>	<p>Capacity is about ensuring availability at peak. Capacity resources receive an availability payment in exchange for making this capacity available at times of need. Settlement charges are not penalties but are meant to incent and signal the importance of performance at times of need. Capacity resources who deliberately chose to make themselves unavailable during times of need would not be meeting the letter or spirit of their capacity obligation.</p>
<p>Would the 2 month penalty charge be waived if the resource was being affected by the event (storm hurricane or line outage etc.)?</p>	<p>If the resource was truly unavailable for an event, they would be expected to remove bids/offers as soon as possible –this is a market rule obligation for all market participants.</p>

Feedback	IESO Response
<p>Please confirm that the capacity charge for failure during an out-of-market control action leading up to or during an Emergency Operating State Control Action (EOSCA) would only apply based upon any difference between the resource owner's actual MW generation and its UCAP and based upon the capacity price in \$/MW-month.</p>	<p>The capacity charge is for an entire month's availability payment (or two-months in the case of an EOSCA activation). The charge calculation would be similar to the capacity charge calculation which will be outlined in upcoming market manuals.</p>
<p>Please explain why the capacity penalty charge for failure in an EOSCA event is always 2 x two capacity monthly payments when the non-performance factors for availability charge is 1 x in shoulder months and 2 x in peak months? Why shouldn't the capacity charge also reflect a lower capacity charge in shoulder months than in peak months?</p>	<p>The objective of this capacity charge is to incent performance in times of system need, whereas the availability charge is meant to incent resources to be available during peak.</p>
<p>A resource owner that is deficient 1 MW in availability and that coincides with when an out-of-market action occurs such that a capacity penalty applies, that 1 MW would attract up to 6 x the monthly capacity payment (if it were to occur in a peak month). We disagree that such a system of pancaked penalty charges is necessary</p>	<p>The holistic set of enhancements to the performance obligations and assessment framework provide a balanced set of recommendations between greater fairness and consistency while also signaling the importance of performance during times of need.</p>

## Availability Assessment True-Up

Feedback	IESO Response
<p>We request further clarification as to the availability credits which, as proposed, are capped at the lesser of 15% of the capacity resource's capacity obligation or its cleared ICAP. We note that other jurisdiction such as PJM payout incentives based upon penalties collected; the merits of this design are that incentives and penalties are symmetrical such that penalty risks are revenue neutral. How was the cap of 15% determined?</p>	<p>The 15% provides a reasonable cap on over-availability while allowing a resource to balance out its availability charges when, on average it can make its cleared UCAP available in the energy market.</p>
<p>Is the availability assessment/charge assessed on a monthly, seasonal, or annual basis?</p>	<p>The availability assessment true-up is assessed at the end of the obligation period for each period.</p>

## Other

Feedback	IESO Response
<p>Currently HDR resources are unable to report outages similar to other resources. Based on how the HDR resource is measured, the outage of a large contributor in a resource will negatively impact assessed performance</p>	<p>The IESO is undertaking work to better understand, and potentially develop a solution, to issues around HDR contributor outages impacting assessed performance</p>
<p>There is a concern that the 5% EFORD for storage resources is arbitrary. Does the IESO have any analysis to support this assumption?</p>	<p>The 5% EFORD for dispatchable storage is consistent with metrics used by other ISOs. In the absence of a sufficient amount of dispatchable storage resources participating in Ontario's market from which another rate can be determined, this approach is a reasonable metric. As more dispatchable storage resources participate in Ontario's markets in the future; a resource-specific forced outage rate can be determined.</p>