

Stakeholder Feedback and IESO Response

Capacity Auction – July 22, 2021 Webinar

Following the July 22, 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 (AEMA)
- Capital Power
- Enel X
- Northland Power
- Ontario Power Generation
- Rodan Energy
- TC Energy

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.

HDR

Feedback	IESO Response
<p>Baseline / In – Day Adjustment:</p> <p>Resources need to be measured correctly.</p> <p>Quality Baselines required.</p> <p>Baselines should be based on contributor level versus the portfolio level.</p> <p>Baseline does not accurately reflect MW being reduced.</p> <p>Opt out of in-day adjustment should be allowed.</p> <p>UCAP for capacity qualification should not be used for HDR until their value is accurately measured/reflected and the baseline review is completed.</p>	<p>IESO is conducting a review of the performance of the current baseline methodology and expects to share the preliminary results of this review with stakeholders in September.</p>
<p>Line Losses:</p> <p>Suggests line losses should be added to the UCAP calculation. Rationale for not considering them should be provided. Suggests line losses could be added to the Contributor Portal (rather than in the UCAP formula)</p>	<p>IESO is not considering credits/gross ups to account for avoided line losses for 2022, since deliverability is not currently part of the qualification process for internal (i.e. located in Ontario) resources. Accounting for line losses would also require significant changes to the modelling of virtual resources and other measurement considerations.</p>
<p>Penalty / Performance Scheme:</p> <p>Should ensure resources meet obligations.</p> <p>Needs to be strong and fair.</p> <p>Underpays strong performers/overpays under performers.</p>	<p>The IESO presented a number recommended enhancements to the performance obligations and assessment framework at the August Resource Adequacy engagement webinar.</p>

Feedback	IESO Response
<p>PAF:</p> <p>Imposes penalties on future products that are not reflective of the actual resource that delivers capacity, since participants fluctuate / contributors can move from one aggregator to another. Should not be applied in future years.</p>	<p>The principle underlying qualification is that historical performance metrics (production, availability, testing) will be used as inputs into deriving future qualified capacity. A PAF applied to an HDR resource does not place a cap or limit on the amount of MWs that a resource can offer into the auction in subsequent years but is meant to qualify the eligible capacity by an amount reflective of actual performance in previous obligation periods. The IESO believes performance from previous obligation periods to be the most appropriate metric to qualify this resource type and assess its future potential contributions to reliability. The risk of managing the performance of individual contributors will continue to be the responsibility of the aggregator to manage.</p>
<p>PAF:</p> <p>How would the PAF be adjusted based on a resource activation? (Example requested). Is the PAF eligible to be adjusted after every activation?</p>	<p>Determination of seasonal PAFs will be based on Assessed performance during capacity test activations that occurred in the equivalent seasonal obligation period two auction years prior. For example, performance in auction year 2022 will be used in qualification for the December 2024 auction. The time-lag is due to the overlapping timelines between when capacity qualification for a future auction begins and when performance data from a previous obligation period is available. The PAF is not adjusted within an obligation period; it is set on an annual basis for each forward obligation period. PAFs will be based on performance during capacity test activations, or, if capacity test activation data is not available for a particular resource, a class average may be used.</p>

Feedback	IESO Response
<p>PAF:</p> <p>If a PAF is adjusted from a capacity test check, does that change a resource’s availability payments during the current obligation period?</p> <p>Can participants request for a redo of the capacity test check?</p>	<p>The calculation of a new PAF occurs annually, in advance of the auction based on the previous year’s performance. Performance during the current obligation does not affect the PAF for current obligation, it will only apply for a future auction period (two years in the future). There are no changes to availability assessments in an obligation period based on test performance in that period.</p> <p>It will be at the IESO’s discretion as to whether a second test will be conducted. A re-test would be considered for resources which failed the first test. The IESO would take the performance of the most recent test.</p>
<p>PAF:</p> <p>Will participants be able to improve their PAF?</p> <p>If a market participant has registered new loads or has made facility modifications, could that reset or improve the PAF/UCAP?</p>	<p>A resource can improve 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 the following auction .</p>
<p>Outages:</p> <p>HDRs should be able to schedule outages, like other resources, given the potential impact that a resource contributor on outage during an activation can have on how the resource’s performance is assessed.</p>	<p>The IESO is working with stakeholders to better understand concerns related to the contributor outages and performance assessment and potential solutions if warranted, through the HDR baseline methodology review.</p>
<p>Testing: 20% Threshold is too lenient</p>	<p>The IESO has proposed changes to the current performance assessment framework including performance thresholds, as summarized in the August 26, 2021 Stakeholder Engagement session; this includes reducing the threshold for HDR performance assessment to 10% (see slide 18 of the presentation).</p>

General QC Approach

Feedback

Appeal Process:

Request that there be a process to appeal QC result / change result if it is not representative of future operations

Hydro One Response

A key objective of the design of the QC processes is to ensure a clear, transparent process where resource owners should have a good understanding of their expected QC prior to submitting their resource for qualification. Details around qualification processes, procedures, participant requirements and communication protocols will be outlined in associated future design documents and proposed amendments to market rules and manuals. The QC methodologies were also guided by the design principles of simplicity, fairness, transparency and alignment as outlined in the May Resource Adequacy [presentation](#) (slide 46).

Dispatchable Load

Feedback

Top 200 Ontario Demand Hours:

UCAP equation takes bid data from the top 200 hours of Ontario demand per season but dispatchable loads often plan to take outages during peak demand hours.

Will the IESO account for planned/forced outages in the UCAP calculation?

IESO Response

Historical bid data is expected to be representative of future market behaviour and availability, and provides an appropriate reflection of a resource's capability at times of system need.

The UCAP calculation for dispatchable loads does not explicitly account for planned or forced outages, however, bid data from the top 200 hours of Ontario demand per season may capture hours during which a particular resource was on outage. This results in a UCAP value that is reflective of future average availability on a resource-specific basis, which is what the QC process is meant to provide. Also, with a large sample size of 200 hours, most short-term outages would not significantly impact a resource's UCAP value.

Feedback	IESO Response
Example calculation requested.	This will be further illustrated in the future design document.

1MW Size Requirement

Feedback	IESO Response
<p>Concerns that qualification process, including the 4-hour requirement for storage, will result in disqualification of resources if they were close to 1MW before qualification.</p> <p>Suggest the uncertainty of the QC outcome, combined with the time and effort to register will discourage resources from entering</p>	<p>As previously indicated, with transparent, resource-specific QC methodologies, a prospective auction participant should have sufficient clarity regarding how a UCAP value for their resource will be calculated prior to participating in the auction. The 1 MW size threshold is a minimum requirement for participating in both the auction and current and future MRP energy market design.</p>

ELCC

Feedback	IESO Response
Request for IESO to consider if ELCC is a more accurate measure of capacity value of renewable resources and if it should be used in both planning and procurement processes to maintain alignment within IESO	<p>ELCC is not currently used in the IESO's system planning processes and it is important for planning and procurement of resource adequacy needs to be as closely aligned as possible, while accounting for the requirements of different mechanisms. If in the future, the IESO moves towards incorporating ELCC into the planning models, its use in the Capacity Auction/Acquisition mechanisms may be re-evaluated.</p>

4 Hour Requirement

Feedback	IESO Response
<p>More info on the basis of the 4-hour requirement, other than stating it will provide a good balance between stakeholder and system need.</p> <p>What is the analysis supporting 4 hours?</p>	<p>A 4-hour requirement ensures we have sufficient assurance that committed resources can be relied upon to meet peak capacity needs that endure for several hours. Similar 4-hour requirements are also used by other jurisdictions to reflect peak needs: each of MISO, CAISO, and SPP use a 4-hour duration for both their capacity qualification and eligibility requirements for energy storage.</p>

Dispatchable Hydro

Feedback	IESO Response
<p>Not capturing value – OPG specific:</p> <p>QC approach reduces the overall capability of OPG's dispatchable hydroelectric units by about 1000 MWs as it does not recognize previously agreed to frameworks. Suggests using offers or scheduled energy + scheduled OR, as previously discussed with the IESO</p>	<p>The IESO agrees that it is important to account for scheduled reserve when using production metrics and will incorporate this into the QC methodology.</p>
<p>Not capturing value – general:</p> <p>Concerned that peak hour methodology will not necessarily capture the peak of the plant since the resource could have predicted the peak earlier and generated before the peak hours, especially given that the ICI program can shift the peak from what was previously anticipated – causing UCAP to be lower than it should be</p>	<p>The IESO believes using 200 hours of data per season provides a broad enough sample size to account for peak needs along with output dynamics. This sample size will give a strong indication of a resource's capability at peak and will be a better reflection than if a narrower set of hours were used.</p>
<p>Not capturing value – market renewal implementation:</p> <p>In the future, if the Market Renewal design optimizes assets across multiple intervals and deems a station to run not at peak, then UCAP method will decrease value of hydro electric units / not reflect true capability</p>	<p>The IESO will be utilizing production during the top 200 hours for the 2022 auction but as indicated previously, there will be opportunities to review and adjust formulas in future years based on new market dynamics and lessons learned.</p>

Feedback	IESO Response
How will UCAP for new facility be determined?	Currently the auction is limited to participation from existing facilities at the time of the Auction, with the exception of demand response resources. A UCAP value for a new resource will require further discussion and consultation but would likely be informed by fleet class averages. The IESO will have further discussion on qualification considerations for new resources at a future RA engagement session.

Dispatchable Thermal

Feedback	IESO Response
<p>Demand / EFORd:</p> <p>Will EFORd be calculated according to IEEE Standard 762-2006? Regarding "demand", IEEE Std. 762-2006 states: "Demand can be defined as the traditional demand for the generating unit for economic or reliable operation of the system, or it can be any other user-defined condition, such as specific weather condition, load level, or energy price."</p>	<p>The IESO has been using the IEEE 762-2006 standard for several years.</p>
<p>Demand/EFORd:</p> <p>Which method does the IESO use for calculating demand periods, including generating units with low capacity factors? Can the IESO share an example of a resource's EFORd calculation, including calculation of the demand factor?</p> <p>An unweighted, 5 year rolling average may not reflect the true unforced capacity of peaking facilities with low capacity factors. The EFORd calculation should be structured to reflect the availability of facilities during periods of high demand, rather than the average availability over a historical period</p>	<p>IESO uses the IEEE 762-2006 standard to calculate EFORd for all resources including resources that have low capacity factors.</p> <p>IESO will include further details in the future design document.</p>

AAR

Feedback	IESO Response
<p>Has the IESO committed to a 500 MW capacity target for all Winter capacity auctions between now and 2026?</p>	<p>The IESO has committed that the <i>minimum</i> capacity auction target for the winter obligation period will be no less than the 500 MW minimum target threshold from now to 2026. Due to the use of a downward sloping demand curve, it's possible that an amount greater than 500 MW could be procured. The 2020 Annual Planning Outlook did not identify needs greater than 500 MW for the winter periods; Auction targets for future years will be communicated via the AAR.</p>
<p>Will the IESO consider setting the minimum Winter capacity targets as a percentage of the Summer capacity target? If not, why?</p> <p>As the system's capacity needs grow, a static minimum capacity target becomes an increasingly ineffective means of maintaining a competitive pool of resources to compete in future auctions.</p> <p>Current procurement mechanisms (CA, medium term and long term RFPs) are not intended for large hydro or nuclear...then where can they demonstrate their long term system and ratepayer value?</p>	<p>Thank you for your feedback. Suggestions for future AARs and improvements to the IESO's acquisitions strategy will be considered during the next AAR cycle, anticipated to start after the release of the 2021 APO.</p>
<p>Can the IESO please provide its detailed rationale as to why a minimum capacity target of 500 MW was chosen, and its assessment as to how that quantity will satisfy the criteria laid out in its May 28, 2021 presentation (both in 2022 and 2026)?</p>	<p>The 500 MW determination addresses a need to provide some additional business certainty that competitive opportunities will continue to exist on a seasonal basis while managing costs to ratepayers from significant over procurement. Due to the use of a downward sloping demand curve, it's possible that an amount greater than 500 MW could be procured.</p>

Feedback	IESO Response
<p>Northland notes that a 500 MW target would only permit 900 MW of capacity to clear the auction, and that would require a clearing price of \$0/MW per business day. In reality, far less capacity should be expected to clear future auctions when the target capacity is set to 500 MW.</p>	<p>The IESO will not speculate on outcomes other than noting the clearing price and clearing capacity values will be a function of competitive supply offers and the downward sloping demand curve.</p>
<p>7-10 years is insufficient to recover capital costs of a hydroelectric facility and lead times for the long term RFP may be insufficient for some technologies</p>	<p>The IESO has engaged with stakeholder on the Resource Adequacy framework over the last 2 years, including on the commitment period lengths for competitive procurements (short-term, medium-term and long-term). The intent of the framework is that acquisitions for each of these timeframes would run on a cadenced, cyclical basis to continue to meet Ontario’s system as identified in the APO and AAR. Similar to other jurisdictions that leverage shorter-term commitment periods, it is the combination of term length and the cyclical nature of the acquisitions that provide financial certainty. For example, a new-build resource may first participate in a long-term RFP, and then subsequently in a combination of short-term RFPs and capacity auctions, so long as it is economic.</p> <p>The Resource Adequacy Framework also allows for bilateral negotiations in instances where a need exists that cannot be addressed in a practical and timely way through competitive process. Should a technology not be able to participate in such technology-agnostic mechanisms, the framework is designed to work alongside programs and government policies.</p> <p>Nevertheless, the IESO plans to engage with stakeholders in a more targeted manner on the Long-Term RFP and design considerations to better understand the realities of all eligible technologies.</p>