Capacity Auction Enhancements –

November 22, 2022

Feedback Provided by:

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Date: December 12, 2022

Following the November 22 Capacity Auction Enhancements engagement session, the Independent Electricity System Operator (IESO) is seeking feedback from participants on the information presented at the session as outlined in the table below.

The meeting materials from this session can be found on the Capacity Auction Enhancements engagement initiative.

Please provide feedback by December 12, 2022 to **engagement@ieso.ca**.

This feedback will be posted on the Capacity Auction Enhancements engagement webpage **unless otherwise requested by the sender or noted as confidential.**

The IESO will work to consider and incorporate comments as appropriate and post responses on the webpage.

Thank you for your contribution.

Engagement Topic 5.0 – Qualification: HDR Resources (Availability De-rate)

Topic	Feedback
Please provide feedback on IESO's preferred design for hourly demand response (HDR) qualification and the in-period adjustment as outlined Design Memo 5.0 – Capacity Qualification (HDR Resources) Are there any concerns or items of clarification the IESO should address before finalizing the design?	Voltus understands the IESO's objectives with the current Capacity Qualification effort. However, we are concerned that in the pursuit of the appearance of fairness, the IESO is failing to acknowledge the unique differences between the resources being procured. Voltus and the AEMA have routinely highlighted to the IESO that line losses are a key component in determining the UCAP of Demand Response and Dispatchable Load resources. By failing to acknowledge the value of avoided line losses in its procurement processes, IESO is costing ratepayers money and adversely affecting the competitiveness of demand response. The IESO recently procured 593 MW of Virtual Demand Response Capacity and at least an additional 100 MW of Physical Demand Response Capacity. At a system average loss factor of 3%, 20 MW were procured but not counted, for a loss of almost $1 Million per year to market participants. Other ISOs and RTOs across North America credit line losses when calculating UCAP for demand response, and IESO should do the same. Voltus reiterates its comments from October that the current proposal to reduce in-season capacity payments, issue a capacity charge *and* de-rate resources into the future based on a single capacity test performance is duplicative. Just one of these two program design changes (PAF or in-season reductions) would create sufficient incentive for participants to nominate HDR participants for conservative, reliable MW volumes that can be counted upon to perform in emergency conditions. Adopting a capacity charge, a UCAP Adjustment Charge and a PAF de-rate is unduly punitive toward HDR resources. Additionally, the proposal to de-rate at the resource level reflects a misunderstanding of how aggregated resources are formed and function. Aggregated resources comprise many underlying commercial and industrial facilities with curtailable load. The performance of each underlying

	facility is independent of the performance at others. The mix of resources in an aggregation changes season-to-season and year-to-year. Consider an aggregated resource that is nominated for 10 MW but performs at 8 MW. The resource is made up of Site A, which performed at 6 MW on a 5 MW nomination and Site B, which performed at 2 MW on a 5 MW nomination. The aggregated resource is assigned an 80% de-rate into the future. Based on its poor performance, Voltus drops Site B from its portfolio. Voltus then signs up two new facilities, Site C and Site D, and subjects them to Voltus-run pre-season testing in which they demonstrate 3 and 4 MW of curtailment respectively. Now, based on performance data, Voltus believes that its resource can perform at 13 MW (6 MW from Site A + 3 MW from Site C + 4 MW from Site D). The resource's UCAP, however, would be de-rated from 13 MW to 10.4 MW based on the historical poor performance of Site B, which is now no longer in the resource at all. Any de-rating should occur at the utility account level, and should be applied as a kW cap rather than a percent de-rate. Tactically, this would mean that on a go-forward basis Site A could be nominated for up to 6 MW (its test performance) and Site B for only 2 MW. New sites, like C and D, would not have performance history with IESO so would not be subject to enrollment caps or de-rates. A MW cap, rather than percent, would also prevent gaming. In the hypothetical above, where Voltus's belief is that the resource could perform at 13 MW but it is facing an 80% derate, our incentive would be to enroll the resource for 16.25 MW of ICAP so it would be derated to 13 MW. We have heard the IESO's concern that this would require the IESO to develop additional systems to track data on a more granular level. We encourage the development of these systems by the IESO as it will not only enable a better demand response resource, but also prepare the IESO for further enablement of demand side resources.

	Every other ISO in North America has started on this journey and we think the IESO is also up to the task. If the IESO is intent on applying percentage derates on a go-forward basis, which neither Voltus or the AEMA have supported, we would like to make clear that **additional tools are required by aggregators to manage these risks**. This includes, at a minimum, access to multiple resources within each zone and the ability to buy-out monthly without buying out of the entire season. Is the IESO able to comment further on the potential availability of these previously discussed tools prior to the Summer 2024 Capacity Season? Voltus appreciates the efforts that the IESO is going through to provide additional clarity around test timing to better allow aggregators to communicate with contributors around outages, etc. Voltus is concerned about testing resources during the shoulder months as this will lead to HDR Aggregators being forced to clear at their minimum capacities and not their average capacities. Tests should occur in weather conditions that reasonably mimic conditions when a real HDR event could occur. Last, if the IESO is set on adopting the In-Period UCAP Adjustment Charge, if the resource performs at or above its UCAP during a subsequent activation (voluntary economic, dispatch test, or emergency activation), will this charge be reversed? ConEd's Commercial System Relief Program (CSRP) functions in this way and sets payments for each period based on a resource's performance in the most recent activation. For example, for a performance period from May 1, 2022 to November 1, 2022; with activations occurring June 14, 2022, July 27, 2022 and August 30, 2022, a resource would be paid as follows: May 1, 2022 to June 14, 2022 - based on its June 14, 2022 performance. June 14, 2022 to July 27, 2022 - based on its July 27, 2022 performance.

	July 27, 2022 to November 1, 2022 - based on its August 30, 2022 performance. This incentivizes resources that haven't performed in a recent activation to more actively participate in the market and allows a better reflection of availability throughout the capacity period based on resource performance throughout that period.

Engagement Topic 6.0 – Contributor Outage Management and Performance Thresholds

Topic	Feedback
Please provide feedback on IESO's preferred design as outlined in Design Memo 6.0 – HDR Contributor Outages and/or Design Memo 6.1 – Performance Thresholds Are there any concerns or items of clarification the IESO should address before finalizing the design?	Contributor Outages Voltus provided an example in its November comments to the IESO that is not being addressed by the current proposal. In Voltus' example, a contributor's ability to curtail is on outage, but its load remains online. As a result, it contributes to the resource's In-Day Adjustment Factor (which in the example below caps out at 1.2), but does not provide any response. This inevitably drives unpredictable performance that is difficult for any aggregator to take into account when updating offers. As a result, Voltus proposes that contributors with equipment outages also be eligible for outage management and be removed from data submissions. The IESO has Force Majeure as an option for a contributor outage. In the IESO's opinion, would this example qualify as Force Majeure? Example provided in previous comments: - Resource composed of 4 sites with the following baselines and nominations: - Site A: 30 MW Baseline, 30 MW nomination. Site's generator is on outage and unable to respond to an event that week.

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Site B: 30 MW Baseline, 15 MW Nomination.
Site C: 20 MW Baseline, 10 MW Nomination.
Site D: 20 MW Baseline, 5 MW Nomination.

The day-of loads for each site are higher than their baselines due to weather conditions.
Loads in the IDA period are as follows:

A: 40 MW
B: 35 MW
C: 30 MW
D: 25 MW

<table>
<tr><td>Resource baseline</td><td>100 MW</td></tr>
<tr><td>Adjusted baseline including site with generator on outage:</td><td>120 MW*</td></tr>
<tr><td>Resource load at time of activation</td><td>130 MW</td></tr>
<tr><td>Resource load after curtailment</td><td>100 MW</td></tr>
<tr><td>Resource load reduction from baseline</td><td>20 MW</td></tr>
<tr><td>Actual Curtailment</td><td>30 MW</td></tr>
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*Capped at 1.2

This circumstance becomes likely in the early Summer period and has impacted Voltus’ resources before.
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Engagement Topic 7.0 – Demand Curve Review

Topic	Feedback

Please provide feedback on IESO's preferred design as outlined in Design Details: Design Memo 7.0 – Demand Curve Price Parameters Are there any concerns or items of clarification the IESO should address before finalizing the design?	Voltus is supportive of the new demand curve parameters.

Market Rules and Manuals

Market Rule and Manual	Feedback
Please provide feedback on the Batch 1 Market Rule and Manual amendments	Voltus will provide comments on Batch 2 of Market Rule Amendments

General Comments/Feedback:

Voltus would like to thank the IESO for productive conversations at and between the stakeholder sessions. We have some concerns that pathways identified during key discussions have not seen follow-up or response in later sessions. For example, the IESO was quite confident in the October sessions that multiple aggregations could be explored as a tool for aggregators to manage risk in the face of rapidly increasing penalty structures. However, there has been no additional discussion on this pathway since the October session. Last, Voltus has continued concerns with the consolidation of performance risk within a single event without any additional tools being provided by the IESO to manage this risk. New York is the only other jurisdiction in North America that subjects demand response resources to performance derates, and this is done at the utility account level, and not on an aggregation. Examples abound of less punitive programs that still manage to incent strong performance, and by incorporating Voltus's feedback we believe that IESO can strike the proper balance for HDR as well.