

Memorandum

To: Technical Panel

From: Adam Cumming

Date: May 9, 2023

Re: MR-00476-R00 – 2023 Capacity Auction Enhancements – Stream 1

In the IESO’s Resource Adequacy Framework (the “Framework”), the Capacity Auction serves as the short term balancing mechanism, helping to secure capacity needed to meet Ontario’s resource adequacy needs. The Capacity Auction enables participation from a diverse range of resources that compete annually to be available for two six-month obligation periods (summer and winter). Additional information on the Capacity Auction can be found on the IESO’s Capacity Auction [webpage](#).

Over the next several years, the IESO expects to acquire increasing amounts of capacity from the Capacity Auction to meet Ontario’s resource adequacy needs in conjunction with the other procurement mechanisms in the Framework.

In order to enhance the reliability and market performance of acquired capacity resources, the IESO has engaged with stakeholders to design enhancements participation and performance assessment criteria for the 2023 Capacity Auction (collectively, “2023 Capacity Auction Enhancements”). A collaborative approach to stakeholder engagement on the 2023 Capacity Auction Enhancements has resulted in a robust set of designs that will achieve the IESO’s objectives for the enhancements while incorporating stakeholder proposals.

Objectives of the 2023 Capacity Auction Enhancements

In the coming years, the Capacity Auction will be an increasingly important component of the Framework. Consequently, the reliability of Capacity Auction resources will be increasingly important as the IESO will need to have confidence that the amount of capacity that each resource is expected to contribute to resource adequacy is actually able to perform to its obligations. With that in mind, the 2023 Capacity Auction Enhancements are intended to help improve resource performance as well as further enhance competition in order to continue to contribute to ratepayer value as auction targets increase.

The following design enhancements are proposed for implementation in advance of the 2023 Capacity Auction.

Enhancement #1: Capacity Qualification

The IESO is proposing to introduce a capacity qualification process for all eligible resources. During the pre-auction period, resources that intend to participate in an upcoming Capacity Auction will be required to submit an installed capacity (ICAP) value for qualification of each resource. The IESO will apply resource-specific capacity qualification methodologies to derive an unforced capacity (UCAP) value that will represent the maximum quantity that the resource may offer into the auction. Non-hourly demand response resources will have an availability de-rating factor applied to them based on historical performance, while Hourly Demand Response (“HDR”) resources could be subject to an equivalent in-period cleared UCAP adjustment.

Enhancement #2: Performance Assessment Framework Modifications

The IESO is proposing to revise the capacity testing framework in order to provide greater flexibility to participants to successfully demonstrate they can perform to the capacity amounts they submitted during the capacity qualification process. The intent of the updates to the testing protocols and performance assessment for the capacity test is to better define the performance requirements and introduce a testing process that is carried out consistently across resource types.

The key design elements of the revised testing framework are:

- Participants will be given five business days to schedule and conduct their own capacity test.
- Participants will be given 10 business days' notice prior to the capacity test week.

- Participants will be required to deliver to their cleared ICAP, within the applicable performance threshold amount.
- Performance thresholds for what constitutes a successful capacity test are being modified. HDR resource performance thresholds will be reduced to 10% from 20%, while all other resources will have a 5% performance threshold.
- Allowable exceptions to the capacity test provide an opportunity to re-schedule the testing week (e.g., third party outage, force majeure).
- IESO has discretion to dispatch test resources by scheduling in the energy market to verify ability to comply with dispatch based on submitted bids and offers.

The IESO is also proposing to introduce two new true-up payments. The availability true-up payment is intended to allow resources to recover availability charges incurred if that resource bids/offers in excess of its capacity obligation, over the duration of the obligation period. The new true-up ensures fairness by aligning the average assessment in the pre-auction UCAP qualification with an average assessment of availability during the obligation period. It also incentivizes continued offering of a resource's full capability (i.e., their ICAP) to the market. The payment can only recover availability charges incurred throughout the obligation period. No extra payments can be earned for over-availability.

The second true-up payment is the capacity charges true-up payment. This true-up payment will ensure that the total charges incurred in an obligation period do not exceed availability payments in the same obligation period.

Lastly, as part of the Performance Assessment Framework Modifications, the IESO is proposing to introduce an HDR Contributor Outage Solution. In the past, stakeholders raised concerns that a contributor on a forced outage may negatively affect the HDR baseline calculation and subsequent HDR performance assessment. As a result, an optional mechanism to declare an outage of a virtual HDR contributor, and subsequently remove that contributor from the baseline calculation, has been developed with input from stakeholders. Declaring a contributor outage is entirely optional. Participants may choose to (but are not obligated to) use the contributor outage process in order to offer relief where a contributor outage has occurred.

Enhancement #3: Demand Curve and Standby Trigger

The demand curve parameters, originally set in 2015, were reviewed and updated to reflect the evolved role of the capacity auction. The reference price was updated from \$413/MW-day ICAP

to \$644/MW-day UCAP, and the maximum auction clearing price has been updated to 1.5x the reference price.

Additionally, prior to the 2022 Capacity Auction, the IESO reviewed the standby trigger and has updated it to \$200/MWh. This change is effective for the 2023/24 commitment period.

All enhancements were further described in the Technical Panel education presentation found [here](#). For additional information on specific design elements, the 2023 Capacity Auction Enhancements Design Memos are available on the Capacity Auction Enhancements [webpage](#).

Stakeholder Feedback

Over the past year, the IESO held a series of stakeholder sessions to discuss the evolution of the Capacity Auction. Materials from these sessions, including presentations and stakeholder feedback, is available on the Capacity Auction Enhancements [webpage](#).

Stakeholder feedback provided during the engagement process has helped the IESO to make multiple revisions and additions to the relevant enhancements. For example, the IESO adopted proposals from stakeholders in developing (i) the in-period cleared UCAP adjustment process for HDR resources, (ii) the changes to the testing framework to allow for self-scheduling tests, (iii) the revision to the HDR standby price trigger, and (iv) the adoption of an HDR Contributor Outage Solution.

More recently, at the March 2023 stakeholder engagement session on the Capacity Auction, the following items were identified by stakeholders and the following adjustments were made to the proposed market rules amendments:

- Stakeholders identified that the in-period cleared UCAP adjustment should be based on the final settlement statement to allow for time to process a notice of disagreement (NOD) if one is filed. The IESO agreed this timing must be considered in the implementation of the in-period adjustment and has made clarifications to the timing and application of the in-period cleared UCAP adjustment in the amendments to the market rules and market manuals.
- Stakeholders requested that no changes be made to the audit provision until audits can be reviewed holistically. The IESO agreed that no changes would be made at this time to the audit provision and has removed the proposed amendments in section 4.7J.4 of Ch. 9. In addition, it is now specified in Market Manual 12 and Market Manual 5.5 that

the in-period cleared UCAP adjustment will not be reassessed as a result of a measurement data audit.

- Stakeholders indicated that changes to audit-related provisions in Market Manual 12 relating to contributor outages were out of scope for this engagement. The IESO identified that any change or impact to HDR measurement data submissions would inherently need to be considered in the audit, since the purpose of the audit is to validate the integrity of HDR measurement data submissions. If a participant elects to not use the contributor outage solution, the audit process would be conducted as it is currently. In order to verify that a contributor outage actually occurred, the IESO must evaluate the contributor's interval data, which is only available at the time of an audit.

During the stakeholder engagement process, stakeholders requested that the IESO include additional design elements in the Capacity Auction Enhancements. These included:

- Multiple HDR Resources per Zone.
- Monthly Buy-Outs.
- Including loss factors in the HDR capacity qualification methodology.
- Review of audit process.

The IESO determined that these specific enhancement requests would require additional time and consideration to be properly addressed and as such, they have not been included in the current proposed market rules amendments. The IESO intends to continue discussions with stakeholders on these topics and others to continue to enhance and grow the Capacity Auction.

Panel Action and Next Steps

The IESO recommends that the Technical Panel vote to post the proposed market rules amendment MR-00476-R00 for stakeholder review and comment for a period of two weeks, ending on May 30, 2023.

Accompanying Materials

- Market Rules Amendment Proposal Form - MR-00476-R00 – Version 3
- Market Manual 4.3 - Real Time Scheduling of the Physical Markets
- Market Manual 5.4 - Prudential Support
- Market Manual 5.5 - Physical Markets Settlement Statements
- Market Manual 12.0 - Capacity Auctions
- Market Manual 7.3 - Outage Management
- IESO Charge Types and Equations