

Capacity Auction Enhancements

Capacity Auction Team



Territory Acknowledgement

The IESO acknowledges the land we are delivering today's webinar from is the traditional territory of many nations including the Mississaugas of the Credit, the Anishnabeg, the Chippewa, the Haudenosaunee and the Wendat peoples and is now home to many diverse First Nations, Inuit and Métis peoples. We also acknowledge that Toronto is covered by Treaty 13 with the Mississaugas of the Credit First Nation.

As we have attendees from across Ontario, the IESO would also like to acknowledge all of the traditional territories across the province, which includes those of the Algonquin, Anishnawbe, Cree, Oji-Cree, Huron-Wendat, Haudenosaunee and Métis peoples.



Today's Discussion

- Stakeholder feedback from April 8, 2025 engagement
- 2025 Capacity Auction enhancement designs
 - Enhanced tie-break methodology
 - Timelines for Market Rule (MR) and Market Manual (MM) amendments for the tie-break methodology enhancement.
- Summary and next steps



Summary of Stakeholder Feedback: April 2025 Session



April Stakeholder Feedback

- The IESO requested participant feedback following the April 8, 2025 stakeholder engagement session and four responses were received.
- The IESO's response to stakeholder feedback is posted to the <u>Capacity</u> <u>Auction Enhancements</u> engagement webpage.
- The following slides focus on stakeholder feedback related to design details discussed in today's presentation.



Tie-Break Methodology

Feedback:

 Stakeholders said that the current tie-break methodology is inadequate and a barrier to participation. Stakeholders were most concerned about the delayed implementation of an enhanced tie-break mechanism and requested that an interim implementation solution be used for the 2025 auction.

Response:

- The IESO has reprioritized the tie-break methodology enhancement, targeting the 2025 capacity auction.
- The IESO will outline the enhanced tie-break methodology, including proposed Market Rule amendments, in the presentation today.



Capacity Auction Design for Tie-Break Methodology



Recap: Tie-Break Methodology Enhancement Feedback

 In recent years, stakeholders have consistently urged the IESO to review the Capacity Auction tie-break methodology and consider improvements to the design, arguing that the current methodology does not award capacity to tied offer laminations appropriately.



Recap: Current Tie-Break Methodology

- A tie-break occurs when two or more Capacity Auction offer laminations are submitted at the same price for the last available quantity of capacity.
- In these instances, a set of criteria must be used the tie-break methodology - to select which of the tied offers is awarded the capacity.
- Currently, the offer that was submitted earlier based on its time stamp is selected.



Recap: Tie-Break Methodology Proposal

- The goal of the enhanced tie-break methodology is to award capacity as equitably as possible.
- At the November 2024 engagement, a multi-stage approach to breaking a tie was presented for stakeholder feedback.
- One element of the solution that required finalization is the treatment of obligations of less than 1 MW.
- This will be the focus of today's presentation.



Tie-Break Methodology Proposal

Step 1

- Divide the remaining capacity by the number of tied offers, rounded down to one decimal place, to determine an equal share.
- •If an offer is less than or equal to that equal share, the offer is allotted its capacity.
- If an offer is greater than that equal share and is flagged full, the capacity is not allotted, and it is not considered further in the tie-break solution.
- If an offer is greater than that equal share and is flagged partial, the offer is allotted that equal share.

Step 2

- If capacity remains after Step 1, allot remaining available capacity proportionally to all tied offers flagged as partial that were not fully allotted in Step 1.
- Determine the proportion based on the offer quantity less the capacity allotted in Step 1, rounded down to the nearest 1 decimal place

Step 3

- If capacity remains after Step 2, rank the tied offers from earliest to latest timestamp, reflecting the time the offer was submitted in Online IESO.
- Allot the remaining capacity to the offer with the earliest timestamp.
- If the offer with the earliest timestamp is fully met and there is still capacity remaining, continue allotting capacity in rank order.

An illustrative example of these steps can be seen in Design Memo 3.0 Tie Break Methodology 2025



Allotments of Less Than 1 MW

- The tie-break methodology allots capacity in increments as small as 0.1 MW. It is possible that the tie-break process may result in a total capacity allotment of less than 1 MW being allotted to a resource.
- In this scenario, the resource that would be awarded an obligation of less than 1 MW will be eliminated, and the tie-break process will be repeated starting again from Step 1.
- An example is provided in the following slides for illustrative purposes.



Allotments of Less Than 1 MW: Example A

(1/3)

In this example, four offer laminations share the same price for the final 3.9 MW. The table below shows the results after completing Steps 1-3:

	Offer (MW)	Lamination	Offer Type	Capacity Allotted after Steps 1-3 (MW)
Offer A	3.0	1	Partial	1.0
Offer B	4.0	1	Partial	1.0
Offer C	4.0	1	Partial	1.0
Offer D	1.0	1	Partial	0.9
Total:	12.0		Total:	3.9



Allotments of Less Than 1 MW: Example A

(2/3)

Offer D has resulted in a capacity obligation of less than 1 MW. Therefore, Offer D is eliminated, and the tie-break process is repeated from Step 1.

	Offer (MW)	Lamination	Offer Type	Capacity Allotted after Steps 1-3 (MW)
Offer A	3.0	1	Partial	1.0
Offer B	4.0	1	Partial	1.0
Offer C	4.0	1	Partial	1.0
Offer D	1.0	i	Partial	0.9
Total:	12.0		Total:	3.9



Allotments of Less Than 1 MW: Example A

(3/3)

After eliminating Offer D and repeating Steps 1-3, the tie is resolved, and all 3.9 MW of remaining capacity is successfully allotted. The results are shown in the table below.

	Offer (MW)	Lamination	Offer Type	Capacity Allotted after Steps 1-3 (MW)
Offer A	3.0	1	Partial	1.3
Offer B	4.0	1	Partial	1.3
Offer C	4.0	1	Partial	1.3
Total:	11.0		Total:	3.9



Allotments of Less Than 1 MW cont'd

- If two or more resources would be awarded an obligation of less than 1 MW after the tie-break process, the resource with the lowest total allotted capacity is eliminated first and the tie-break process is repeated.
- If two or more resources are tied for the lowest amount of allotted capacity in the tie-break, the offer with the latest time stamp will be eliminated first and the process repeated.



Allotments of Less Than 1 MW: Example B

(1/3)

In this example, three offer laminations share the same price for the final 2.8 MW. The table below shows the results after completing Steps 1-3:

	Offer (MW)	Lamination	Offer Type	Time- stamp Rank	Capacity Allotted after Steps 1- 3 (MW)
Offer A	2.0	1	Partial	1	1.0
Offer B	2.0	1	Partial	2	0.9
Offer C	2.0	1	Partial	3	0.9
Total:	6.0			Total:	2.8



Allotments of Less Than 1 MW: Example B

(2/3)

Offers B & C have resulted in capacity obligations of less than 1 MW. Both resources were allotted the same amount (0.9 MW), but Offer C has the later time stamp. Therefore, Offer C is eliminated.

		Offer (MW)	Lamination	Offer Type	Time- stamp Rank	Capacity Allotted after Steps 1- 3 (MW)
	Offer A	2.0	1	Partial	1	1.0
	Offer B	2.0	1	Partial	2	0.9
	Offer C	2.0	1	Partial	3	0.9
1	Total:	6.0		1	Total:	2.8



Allotments of Less Than 1 MW: Example B

(3/3)

After eliminating Offer C and repeating Steps 1-3, the tie is resolved, and all 2.8 MW of remaining capacity is successfully allotted. The results are shown in the table below.

	Offer (MW)	Lamination	Offer Type	Time- stamp Rank	Capacity Allotted after Steps 1-3 (MW)
Offer A	2.0	1	Partial	1	1.4
Offer B	2.0	1	Partial	2	1.4
Total:	4.0			Total:	2.8



Constraints

- It is possible, albeit rare, that multiple constraints could be involved in a tie-break.
 - e.g., an intertie limit and a zonal limit are both reached in the same tie-break scenario, with the available capacity of one limit being lower than the other.
- In this scenario, the capacity allotted through the tie-break must respect all applicable auction constraints.
- The tie-break for the lower limit will be resolved first using the tie-break steps.
- The remaining capacity is then allotted to the rest of the tied offers associated with the higher limit using the tie-break steps.



Tie-Break Methodology: Draft Market Rule & Manual Amendments



Draft Market Rule and Manual Amendments

- Draft Market Rule and Manual amendments reflecting the enhanced tiebreak methodology have been prepared.
- Stakeholders are invited to review and provide feedback on the proposed amendments by July 10, 2025.
- The following slide summarizes how the IESO has translated the tiebreak design details into draft Market Rule and Manual amendments.
- These amendments were made using the <u>Renewed Market Rules and</u> <u>Manuals</u>



(1/2)

Draft Market Rule and Manual Amendments

(2/2)

Item	Summary	Reference
	• The previous tie-break method, which relied solely on time stamp, has been replaced with a multi-step process designed to achieve a more equitable allocation of auction capacity, details of which have been laid out in the Market Rules.	
Tie-break Methodology	 The current time stamp reference found in ss.4.2 of Market Manual 12 has been removed. Footnote #2 previously found in ss.4.2 of Market Manual 12, which described the 'time stamp', has been incorporated into the main body of ss.4.1 under the 'Stage 1: Offer Submission and Validation' section. Screenshots of the proposed amendments to Market Manual 12 are shown on the following slides: 	MM 0.12, ss.4.1. and ss.4.2.



MM-12 Proposed Amendments ss.4.1

4.1. Stage 1: Offer Submission and Validation

(MR Ch.7 ss.18.6.3, 18.7.5)

Capacity auction participants are required to submit *capacity auction offers* via Online IESO, following the auction timelines detailed in <u>section 2.2</u>. Each *capacity auction participant* may submit *capacity auction offers* associated with each potential *capacity auction resource* identified during the capacity qualification process for any quantity between 1 MW and the *unforced capacity*, using offer laminations to reflect the price of providing the various levels of capacity. Each *capacity auction offer* will be assigned a time stamp, which will reflect the date and time, to the second, recorded by Online IESO when a *capacity auction participant* submits or revises a *capacity auction offer* during the two *business day* offer submission window, and, for greater certainty, would be the later of the submission or revision time.



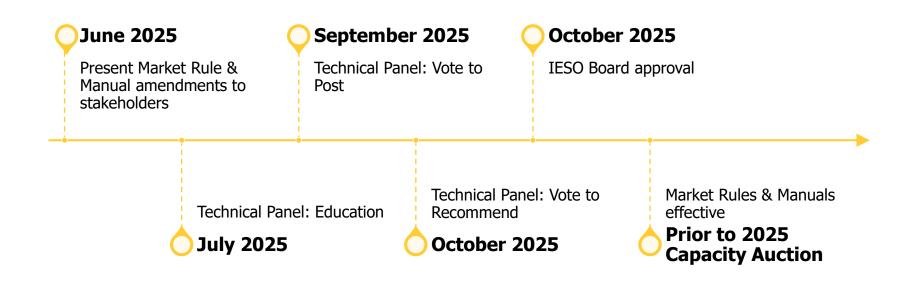
MM-12 Proposed Amendments ss.4.2

In the example illustrated in Figure 4-2, Zone 1 has a total maximum *capacity auction zonal constraint* of 150 MW. All *offers* are stacked by increasing price against the *demand* curve for the *obligation period*. As shown in the figure, after clearing the first offer of 80 MW from Zone 1, the auction engine can only partially clear the second offer (70 MW) at which point the total cleared quantity in Zone 1 is equal to the total maximum *capacity auction zonal constraint*. If the auction engine determines that the un-cleared quantity from the second offer in Zone 1 would have cleared but for the total maximum *capacity auction zonal constraints*, a zonal *capacity auction clearing price* will be determined, in the manner described above. The overall procurement will continue, and the *capacity auction offers* will clear until the intersection with the demand curve at 340 MW, which will also set the *capacity auction clearing price*.

If the *IESO* receives two or more *capacity auction offers* at the same price for the last available quantity, the *capacity auction offer* with the earlier time stamp² shall be selected as the successful *capacity auction offer* (**MR Ch.7 s.18.7.5**).

² A time stamp refers to the time recorded by Online IESO when a *capacity auction participant* submits or revises an offer during the two *business day* offer submission window.

Approval of Draft Market Rule & Manual Amendments









Next Steps

- Using the <u>feedback form provided</u>, stakeholders can submit feedback on the Market Rule amendments by July 10, 2025.
- The IESO will consider feedback before finalizing Market Rule and Manual amendments for the enhanced tie-break methodology for Technical Panel.
- Discussions on future enhancements will resume later in 2025.



Pre-Auction Reminders

- The 2025 Capacity Auction will be held November 26-27, 2025.
- The Auction Timelines document has now been posted on the Capacity Auction <u>webpage</u>, outlining key auction deadlines and milestones participants should be aware of.
- Updated training materials reflecting the 2025 commitment management enhancements will be provided in July.





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