

Market Renewal Incremental Capacity Auction

Meeting 5: Response to Stakeholder Feedback

Following the September 28th Incremental Capacity Auction (ICA) stakeholder meeting, the IESO invited stakeholders to provide comments and feedback on a series of design options related to the resource eligibility and participation in the ICA. For each of the options, the IESO asked stakeholders to:

- Provide responses to the questions posed
- For options presented, indicate their preference along with applicable rationale/supporting arguments
- Identify any aspects that they believe require further elaboration or discussion

The IESO received feedback from:

Association of Major Power Consumers (AMPCO)
Association of Power Producers of Ontario (APPrO)
Brookfield Energy
Energy Storage Canada
EnerNOC
Hydro Quebec Energy Marketing (HQEM)
Nalcor Energy Marketing
NRG
Ontario Power Generation (OPG)
Ontario Waterpower Association (OWA)

This feedback has been posted on the IESO stakeholder webpage for this engagement.

Note on Feedback Summary

Feedback from stakeholders highlighted a number of important issues and considerations. The key themes highlighted include:

- The possible role for smaller resources (under 1MW) and aggregation in the ICA.
- Issues related to the participation of Demand Response (DR) resources.
- The need for clarity as it relates to available transmission and distribution capacity ahead of auctions.
- The need to allow a wide variety of resources to participate in the ICA as long as their admission is consistent with broader policy goals.
- Questions related to governance, decision-making and dispute resolution.

Stakeholders also provided a number of individual comments and recommendations on the ICA design elements and options presented.

The IESO appreciates the feedback received from stakeholders. This stakeholder feedback, along with the comments provided at the stakeholder engagement sessions, is important to the collaborative approach the IESO has committed to under the Market Renewal Program and will help inform the design of the ICA. All feedback received has been noted and will be considered as the engagement moves toward making preliminary decisions. Stakeholders will have additional opportunities to provide feedback on these elements throughout the high level and detailed design phases of the engagement. Below, the IESO has provided a summary table which outlines responses in respect of specific feedback or questions for which an IESO response was required at this time.

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Stakeholder comments and IESO responses

Design Element	Company	Feedback	IESO Response
Resource Eligibility	NRG	It is important to enable participation of smaller resources (<1MW) in order to increase participation rate, utilization, and competition. Based on current trends in the industry, 100kW is a reasonable minimum threshold.	<i>The IESO is in the process of developing a DER framework and strategy which will explore how to best integrate these small resources. ICA team will further assess the scope of change required to determine whether it is feasible to lower the threshold of participation.</i>
Resource Eligibility	NRG	It was mentioned during the discussion that currently the aggregation of DR resources is permitted provided that resources are located in single electrical zone and comply with limits and limitations as provided in the DR pre-auction report. This model is proposed to be extended for DR aggregations participation in ICAs. While it would be beneficial to have aggregation permitted across several connection points, it is paramount to address the planning of virtual limitations 4-5 yrs. in advance. What would happen to capacity obligation of DR aggregation, if the system changes drastically between auction time and delivery period so such aggregation can no longer be “behind” single point due to virtual limits?	<p><i>There are complexities associated with resource aggregation which will continue to be considered in the high level design phase.</i></p> <p><i>Aggregated resources permitted to participate in the ICA will be subject to technical limitations based on system capabilities at the time of the auction as well as those expected during the Commitment Period.</i></p> <p><i>Requirements relating to resource aggregation are expected to evolve over time.</i></p>

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Resource Eligibility	EnerNOC	<p>Currently, Hourly DR resources that are aggregated are able to offer into the energy market. However, if the capacity market resources are optimized with the Operating Reserve markets, market rules will need to change to allow for aggregated dispatchable and non-dispatchable loads participation in the operating reserves market to meet the goals of optimization. Aggregators will furthermore need the ability to register and administer customers in a manner similar to the DR Auction. EnerNOC recommends that the rules for Operating Reserves be revised to allow for aggregated dispatchable and non-dispatchable loads to participate in the Operating Reserve market and to ensure the most efficient optimization of resources within the 3 markets.</p>	<p><i>Through the Expanding Participation in Operating Reserve initiative, the IESO has begun a dialogue with stakeholders regarding the potential to expand participation in OR which could include certain DR resource types. A review of Market Rules and Market Manuals to facilitate participation could be an outcome of this initiative. More information is available in the following link:</i></p> <p>http://www.ieso.ca/-/media/files/ieso/document-library/public-info-session/2017/epor-20171110-presentation.pdf?la=en</p>
Resource Eligibility	AMPCO	<p>Some additional information from the IESO would be helpful in determining how the ICA product will be different than the DR product</p>	<p><i>The IESO will provide additional information on this issue at a future session.</i></p>
Resource Eligibility	AMPCO	<p>Some additional information from the IESO in terms of potential aggregation rules or changes would be helpful here</p>	<p><i>The IESO will provide additional information on this issue at a future session.</i></p>

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Resource Eligibility	AMPCO	Additional discussions need to be had on what is the definition of “existing” versus what is “incremental”.	<i>The differentiation between new and existing resources will be determined in later phases of the ICA design, which will be informed by the stakeholder feedback received to date and allow for additional stakeholder engagement. The classification of new and existing may differ with respect to different design elements (eg. Resource Eligibility and Multi-year Commitments).</i>
Resource Eligibility	AMPCO	AMPCO understands that the issue of "regulated entities" does not apply to resources regulated pursuant to O. Reg. 53/05	<i>The IESO confirms that facilities that are subject to rate regulation under O. Reg 53/05 for all or any portion of a Commitment Period will not be eligible to participate in the auction. For clarity, the issue discussed in the session does include entities that own both facilities that are subject to rate regulation (which would not be eligible) and facilities that are not subject to rate regulation (which may be eligible).</i>
Resource Eligibility	AMPCO	Consideration of imports backed by coal-fired generation is a political issue and should be dealt with by Government, not by the Market Renewal Stakeholder Engagement	<i>The IESO will continue to consider this issue in light of the practical and policy implications, including any legal or regulatory considerations. If coal resources are excluded, processes will be developed to ensure compliance (for instance, possibly restricting imports from areas with coal facilities to resource-specific imports).</i>
Resource Eligibility	OPG	IESO should publish a detailed Transmission and Distribution Table well in advance of the auction and provide the means for proponents to ask questions and receive confirmation of connection availability. The IESO needs to provide frequent open and transparent information to keep	<i>This issue will be discussed in more detail as part of the Locational Considerations design element. Transparency is a Guiding Principle of the Market Renewal Program. To the extent that stakeholders request greater transparency concerning any of the processes necessary to administer the ICA, the IESO will endeavour to accommodate such requests, subject to objective constraints</i>

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		proponents up to date on any changes and the rationale for these changes.	<i>(such as availability, confidentiality, privacy, commercial sensitivity, and security limitations).</i>
Resource Eligibility	OPG	Transmission availability for existing resources if there is competition with new resources needs to be clarified. As an example, do existing connection agreements for registered facilities “guarantee” transmission capacity for the generator for the ICA? How will transmission availability work if a generator is successful in one auction but not the next auction and wants to offer into the third auction?	<p><i>Capacity deliverability is a key consideration under ICA. In order for generation to be valuable as a system capacity resource, it must be deliverable on the transmission system to the load centres when required.</i></p> <p><i>The existing connection agreements are not a reflection of capacity deliverability. The IESO will be developing the deliverability evaluation process which will take into consideration details such as this. This process will be determined in later phases of the ICA design.</i></p>
Resource Eligibility	OPG	What is the IESO’s view regarding uprates and existing facilities brought back into operation if the facility has not been deregistered and the existing connection agreement is still in place - can the generator rely on the connection agreement for transmission availability and if not how would this facility queue for transmission availability for the ICA?	<p><i>Capacity deliverability is a key consideration under ICA. In order for generation to be valuable as a system capacity resource, it must be deliverable on the transmission system to the load centres when required.</i></p> <p><i>The existing connection agreements are not a reflection of capacity deliverability. The IESO will be developing the deliverability evaluation process which will take into consideration details such as this. This process will be determined in later phases of the ICA design.</i></p>

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Qualified Capacity	OPG	OPG believes the information and the format is similar between the NERC GADS and CEA datasets. The only difference may be frequency where NERC GADS data is submitted monthly and the CEA reports are annual - please clarify the difference between these two sources.	<p><i>The IESO's understanding is that US generators are required to submit data to NERC whereas it is optional for Ontario generator's to submit data to CEA or to NERC.</i></p> <p><i>The IESO will further explore the differences between NERC's GADS dataset and CEA reports to determine which one is more appropriate for use in determining Qualified Capacity.</i></p>
Qualified Capacity	OPG	It is expected that calculations would be on a facility basis. Is this a valid assumption? Or is the IESO contemplating that the calculation may be for an aggregate of facilities with the same technology?	<p><i>The IESO will determine the appropriate level of granularity and the methodology to assess qualified capacity in the later phases of the ICA design.</i></p>
Participation Requirements	Energy Storage Canada	The IESO Market Rules and applicable Market Manuals require greater details regarding the classification and registration of energy storage facilities for their participation and operations within the IESO-Administered Markets. This will serve to provide a needed framework for energy storage to participate within ICAs and other IESO administered markets.	<p><i>Details relating to the participation requirements of storage facilities for the ICA will be determined in later phases of ICA design, which will be informed by the stakeholder feedback received to date and allow for additional stakeholder engagement.</i></p> <p><i>Broader changes relating to the classification and registration of storage facilities under the IESO Market Rules are out of scope for the ICA stakeholder engagement. The IESO has launched a Non-Emitting Resource Sub-Committee to explore how non-emitting resources can efficiently participate in the IESO-Administered Markets in the future.</i></p>

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			<p><i>In addition, under the Long-Term Energy Plan the IESO in coordination with the Ontario Energy Board will review market rules, industry codes, and regulations, in order to identify potential obstacles to fair competition for energy storage with other technologies in the delivery of services and, where appropriate, propose mitigation strategies. This will be outlined further as part of the IESO's LTEP Implementation Plan Engagement.</i></p>
Resource Eligibility	APPrO	<p>What about imports including contracts with neighbouring jurisdictions such as Quebec - how will they play in capacity?</p>	<p><i>Any capacity imports contracted or otherwise arranged on a firm basis outside of the ICA will be considered existing supply for the purposes of determining Target Capacity (i.e. the "incremental" need) and will not be eligible to offer into the ICA.</i></p>
Resource Eligibility	APPrO	<p>Should imports only be eligible if they are from jurisdictions with similar Capacity Markets which will accept Qualified Capacity imports from Ontario?</p>	<p><i>Linking the ability of external entities to participate in the ICA with the ability of Ontario generators to export does not assist with the realization of the goal of greater competition in the ICA. However, strong efforts have been, and will continue to be, made to put in place arrangements with neighbouring jurisdictions that allow capacity exports on the broadest basis commensurate with maintaining Ontario system reliability.</i></p>

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Resource Eligibility	APPrO	Similar to rate regulated and contracted resources, how will other forms of assistance through programs, grants, etc. be treated in the auction process?	<i>The IESO is interested in stakeholder views on this issue. The IESO does not currently see a prima facie reason to exclude resources who have participated in other programs, provided there is no 'double-counting' of their capacity in terms of meeting overall resource adequacy.</i>
Resource Eligibility	APPrO	The treatment of revenue claw back provisions and fuel supply provisions, availability under existing contracts needs to be clarified.	<i>These details will be determined in later phases of ICA design, which will be informed by the stakeholder feedback received to date and allow for additional stakeholder engagement.</i>
Resource Eligibility	APPrO	Should Regulated Entities be permitted to participate and own capacity?	<i>This question was posed to stakeholders during the September 28 session. The IESO has made a preliminary decision that all entities that meet all applicable requirements would be eligible to participate in the ICA, including Regulated Entities and their affiliates. The IESO is interested in stakeholder views and considerations with respect to this preliminary decision.</i>
Resource Eligibility	APPrO	As a policy should imports be restricted to jurisdictions that have capacity markets? Should there be reciprocity before imports can participate?	<i>Please see earlier response in this regard.</i>

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Resource Eligibility	APPPrO	Restricting the import of coal fired electricity is going to be extremely difficult. It will be difficult to identify, administer and police and may result in legal challenges. If Ontario wants the opportunity of utilizing capacity imports to increase competition and reduce ratepayer costs, one of the unfortunate but necessary implications is that Ontario will have to accept that some of that electricity will come from coal fired generation and possibly at the expense of clean Ontario capacity. Effectively Ontario will need to align its market with adjoining US markets and this will necessarily mean its progress on clean energy will be diluted.	<i>The IESO will continue to consider this issue in light of the practical and policy implications, including any legal or regulatory considerations. If coal resources are excluded, processes will be developed to ensure compliance (for instance, possibly restricting imports from areas with coal facilities to resource-specific imports).</i>
General	APPPrO	Once a high-level design is developed by the IESO for the ICA, there needs to be further scrutiny on the (original) benefit case analysis undertaken.	<i>The Market Renewal Benefits Case included a range of potential benefits from the capacity work stream and the other initiatives under Market Renewal. The report projects net benefits from Market Renewal in the range of \$2.2 – 5.2 billion with the majority of those benefits coming from the capacity work stream. The IESO worked very closely with stakeholders including the Market Renewal Working Group for a period of approximately 9 months to ensure the study established a reasonable range of expected benefits for Ontario. Even at the low end of the benefits assessment, which used a conservative set of assumptions, there is still a compelling case to move forward with the ICA and Market</i>

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			<p><i>Renewal in general. Nonetheless, as design of the ICA progresses, the IESO would welcome stakeholder feedback on specific reasons why decisions within the ICA may result in benefits that differ substantially from the range identified in the Benefits Case.</i></p>
Qualified Capacity	Nalcor Energy Marketing	<p>Slide 134 says the following: “For deliverability of imports, NYISO, MISO & PJM...transmission rights on the common interface are given to import resources that clear the auction.” The presenter provided the following explanation: “If you clear the auction, you’ll have transmission rights to push your MW across the tie.” We would like the IESO to provide clarification as to what this means.</p>	<p><i>The context of the slide in question was to refer to what occurs in other jurisdictions. In this case, specifically NYISO, PJM and MISO. As such, the presenter’s comments would have reflected that context.</i></p> <p><i>In terms of the ICA, it will take into consideration the maximum allowable imported MW from each neighbouring jurisdiction. The process for determining these maximums has not yet been determined, but is expected to consider the physical ability to transfer energy associated with the purchased capacity.</i></p> <p><i>It is not anticipated that firm transmission rights will be awarded by the IESO. If energy from an external capacity source is required to support real time operations, the proponent will be required to schedule the energy in accordance with normal market mechanisms as well as any additional bid submission or identification requirements, if applicable. In order to facilitate the flow of energy associated with capacity imports, the IESO anticipates that operating agreements and/or instructions will be in place with the system operator in any neighbouring jurisdictions with capacity participating in the ICA.</i></p>

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Participation Requirements	Brookfield Renewable	The IESO should further clarify how a Capacity Obligation's actual delivery would be enforced, specifically when obligations have been transferred between participants. For example, the responsibility to deliver on a Capacity Obligation, that has been bought and sold between auction participants, should rest on the final party to have purchased the Obligation.	<i>Details related to the transfer of a capacity obligation (if applicable) will be determined in later phases of ICA design, which will be informed by the stakeholder feedback received to date and allow for additional stakeholder engagement. This will also be discussed further during the Options phase as part of other related design elements such as Rebalancing Auctions and/or Non-Performance Implications within the Forward Period.</i>
Resource Eligibility	Brookfield Renewable	The IESO should carefully involve stakeholders to determine how the DR Auction's capacity product will transition as the ICA's capacity product, because their delivery definitions are fundamentally different.	<i>The IESO agrees this is an important consideration and will work with DR stakeholders and others on integration and transition issues as the design progresses.</i>
Resource Eligibility	Brookfield Renewable	The IESO should commit to high-level principles surrounding Contract negotiations in the Market Renewal process, to ensure that supplier economics are maintained in a fair and transparent process.	<i>The IESO recently held a webinar on Market Renewal and Contracts, where certain high level principles were noted, including that MRP is focused on improving the efficiency of Ontario's electricity markets, and is not targeting to extract value from contracts. As the market design elements advance, more detailed and specific discussions about negotiating principles and contract implications will take place.</i>

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Resource Eligibility	Brookfield Renewable	Brookfield continues to recommend the implementation of a Generation Attributes Tracking System to both enable monetizing renewable attributes and to manage carbon-shuffling issues.	<i>A Non-Emitting Resources Subcommittee has been launched to further explore whether additional mechanisms may be necessary or appropriate in relation to such resources. A means to track environmental attributes may be part of the discussions at the subcommittee.</i>
Resource Eligibility	Brookfield Renewable	Regarding System-backed capacity: The IESO should make clear how it plans to account for the existing Ontario-Quebec capacity exchange Agreement, where a high volume of both capacity and energy are exchanged. Without a clear understanding of how the Agreement works, the IESO also risks double-buying the same capacity and energy from Hydro-Quebec, even though Ontario has already paid for the electricity as per the Agreement.	<p><i>Any capacity imports contracted or otherwise arranged on a firm basis outside of the ICA will be considered existing supply for the purposes of determining Target Capacity and will not be eligible to offer into the ICA.</i></p> <p><i>The IESO agrees that if system-backed capacity is being offered into the ICA, it will be necessary to ensure that capacity is not double-counted and that only one jurisdiction may rely upon the capacity at any given time (which is important for regional reliability).</i></p>

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General	Brookfield Renewable	<p>Given the complexity of Market Renewal, disputes and disagreements with other jurisdictions, between participants, between the IESO and participants would no doubt arise. The curtailment of imported and exported capacity can be contentious in particular. The IESO should therefore enhance its Governance structure and processes, with full engagement of institutions such as the Ministry of Energy, the Ontario Energy Board, the Technical Panel, and the Market Surveillance Panel.</p>	<p><i>To the extent that specific governance-related issues arise or are identified by stakeholders in this forum or any other Market Renewal Program workstream, these issues may be referred to the MRWG with a feedback loop to the stakeholder engagement to ensure transparency.</i></p> <p><i>Where a governance issue is identified that may have a broader impact on the governance of the Market generally, the IESO as a whole will consider those issues.</i></p>
General	Brookfield Renewable	<p>As the IESO currently plays the dual role of System Operator and only Load-Serving Entity in Ontario, conflicts of interest can arise between the IESO's system dispatch and settlement function and its procurement function. The IESO should commit to principles of transparency, fairness, and competition by relying on independent, external analysis and arbitration whenever possible. Such a role is typically played by an Independent Market Monitor in other jurisdictions.</p>	<p><i>Please see previous response.</i></p> <p><i>The IESO has processes in place to ensure the effective separation of its market operations and procurement functions as required by the Electricity Act.</i></p> <p><i>Transparency is a Guiding Principle of the Market Renewal Program. To the extent that stakeholders request greater transparency concerning any of the processes necessary to administer the ICA, the IESO will endeavour to accommodate such requests, subject to objective constraints (such as availability, confidentiality, privacy, commercial sensitivity, and security limitations).</i></p>

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General	Brookfield Renewable	Transmission capacity, both internal to the Ontario Balancing Area and between markets, is a critical factor for Capacity Obligation delivery, new project development, as well as uprates. An independent and unaffiliated third party should review and update the transmission deliverability study of Ontario's external ties and internal network, with full collaboration from Hydro One. A clear, public, and updated understanding of Ontario's transmission grid would provide the necessary information to marketers, generators, and developers to fully participate in the Capacity Auction. Similarly, the IESO interconnection queue should be scheduled in a 'first-come-first-served' and transparent manner, to provide assurance and confidence to developers and uprate projects	<p><i>Transparency is a Guiding Principle of the Market Renewal Program. To the extent that stakeholders request greater transparency concerning any of the processes necessary to administer the ICA, the IESO will endeavour to accommodate such requests, subject to objective constraints (such as availability, confidentiality, privacy, commercial sensitivity, and security limitations).</i></p> <p><i>The interaction of the ICA with existing processes, including existing transmission and connection assessments, will be explored further in the coming months. More information on Deliverability will be discussed early next year as part of the "Locational Considerations" design element.</i></p>

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Resource Eligibility	OPG	The options for determining incremental capacity need to be further discussed in stakeholder sessions and information sessions with contract counterparties.	<i>The IESO is open to further discuss the options for determining incremental capacity with all stakeholders, including its contract counterparties.</i>
Qualified Capacity	OPG	For intermittent resources; such as, wind and solar, Qualified Capacity should be calculated commensurate with their value at system peak. As Ontario is unique with a heavy proportion of intermittent resources it may be preferable to use a hybrid ELCC / capacity contribution calculation which is different than that used in the US. This topic requires further discussion - additional analysis on the magnitude of the difference in the results from the two methods using specific examples would be helpful in this discussion.	<i>Further assessment and analysis will be conducted to explore these two methodologies for qualifying capacity from intermittent resources.</i>
Qualified Capacity	OPG	Qualified capacity calculations for peaking hydroelectric resources require further analysis and discussion.	<i>Certain resource types, including peaking hydro, may require unique methodologies to capture their specific characteristics. Further details in respect of the qualified capacity process will be determined in later phases of ICA design, which will be informed by the stakeholder feedback received to date and allow for additional stakeholder engagement.</i>

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Resource Eligibility	OPG, OWA	For hydroelectric facilities, the uprate capacity and energy could be calculated using a similar procedure to the one developed by the Ministry of Natural Resources for claiming deductions to the Gross Revenue Charge under the Electricity Act, 1998 for incremental energy (“GRC holiday”). This approach applies consistency for determining incremental capacity and energy for hydroelectric resources. The policy and procedure are used by a proponent to prepare and submit applications to MNRF for interim and final determinations on projects, and to direct and guide MNRF's assessment of and determinations on these projects.	<i>Thank you for the feedback. The IESO will review the procedure referenced to better understand the process and will bring this for discussion at a future meeting.</i>
Resource Eligibility	Energy Storage Canada	IESO should publish a detailed Transmission and Distribution Table and provide a way for proponents to ask questions and receive confirmation of connection availability. Therefore, IESO should undertake a formal review of the existing framework establishing a connection queue and related impact assessments (e.g., System Impact	<p><i>The IESO acknowledges the importance of providing participants with information that enables them to make informed decisions about projects and offers into the auction.</i></p> <p><i>The interaction of the ICA with existing processes will be explored further in later phases of the ICA design and implementation, which will be informed by the stakeholder feedback received to date and allow for additional stakeholder engagement. More information on Connection Availability and Deliverability will be discussed early next year as part of</i></p>

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		Assessments).	<i>the “Locational Considerations” design element (including the interaction between new and existing resources offering into the auction).</i>
Resource Eligibility	APPrO	In the event that there was a way that the uprated MW were separately metered [IC = QF * (NC – CC) = QF * MC] could be a solution to determining the incremental capacity. This issue requires further study and discussion insofar as it impacts existing IESO contracts.	<i>The IESO will continue discussions with stakeholders regarding establishing a methodology for defining incremental capacity (and associated qualified capacity), including with respect to the treatment of any incremental capacity/energy at a contracted facility.</i>