Incremental Capacity Auction (ICA) – *Stakeholder Feedback Form*

Stakeholder Meeting: January 24th, 2018

Date Submitted: *March 5, 2018*	**Feedback provided by:** Company Name: APPrO Contact Name: David Butters[1] Phone: [redacted] Email:

[1] APPrO is a trade association representing Ontario IPP and over 100 suppliers of services, equipment and consulting services. APPrO members produce power from co-generation, hydro-electric, gas, nuclear, wind, energy waste wood and other sources. Generator members include:

1. Algonquin Power
2. Bruce Power
3. Brookfield Renewable Energy
4. Capital Power
5. Capstone
6. ENGIE
7. Goreway Station
8. Greenfield Energy Centre
9. GTAA
10. H2O Power
11. Kruger
12. Markham District Energy
13. Northland Power
14. Oakville Enterprises
15. Portlands Energy Centre
16. Regional Power
17. St. Catharines Hydro Generation
18. TransCanada Energy Ltd.
19. TransAlta
20. Toromont

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The IESO held the fourth meeting of the 'Options Phase' of the Market Renewal – Incremental Capacity Auction engagement on January 24th, 2018.

The presentation can be found here.

In order to maximize the effectiveness of this stakeholder engagement process, the IESO requests that stakeholders use the template below to provide feedback on content presented as follows:

- Provide responses to the questions posed
- For options presented, indicate your preference along with applicable rationale/supporting arguments (reference slide numbers where applicable)
- Identify any aspects that you believe require further elaboration or discussion

Please provide feedback by **February 21, 2018** to **engagement@ieso.ca.** Feedback received will be summarized and will help inform further discussions at future stakeholder engagement meetings.

Design Element	Features	Questions/Next Steps/Recommendations	Stakeholder Feedback
Locational Considerations – Part 1	(1a) Capacity Zones - Transmission Limitations *Slides 34-37*	*Please provide any comments or feedback you may have related to this sub-feature.*	APPrO supports the IESO's approach in establishing zones and performing deliverability studies to inform participants as to where capacity is required. The capacity zones should be defined by transmission limitations that restrict capacity delivery either into or out of portions of the power system subject to an open and transparent and industry accepted analysis.
	(1b) Capacity Zones - Reasonably Stable & Predictable *Slides 38-40*	*Please provide any comments or feedback you may have related to this sub-feature.*	APPrO supports an annual assessment for Capacity Zones formation similar to ISO-NE. This periodic assessment will capture system changes as they change with annual auctions and ensure reliability value for cleared capacity. Critical to this initiative is to complete the assessment and review it through a stakeholder process under an appropriate stakeholder approved decision-making provisions. The process should be finalized prior to each ICA, allowing as much time as possible to suppliers and thus encouraging greater participation.

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	(1c) Capacity Zones – Reasonable Size *Slides 41-43*	*Please provide any comments or feedback you may have related to this sub-feature.*	APPrO does not support capacity zone sizes to be set in this manner. To support a properly functioning capacity market it is critical that zones are primarily defined by the electrical system and not arbitrarily.
	(2) Zonal Maximum Capacity *Slides 44-47*	*Please provide any comments or feedback you may have related to this feature.*	APPrO supports the setting of Zonal Maximum Capacity to limit capacity acquired in the ICA within an export constrained Capacity Zone to allow conformance to resource adequacy criteria (i.e. load plus maximum export limit). Zonal Maximum Capacity should be assessed using a probabilistic method similar to ISO-NE. It is however critical to know the method to determine the zonal maximum and the zonal export limits (including external interties as applicable) as well as the capacity values allocated to each generator.
	(3) Zonal Minimum Capacity *Slides 48-52*	*Please provide any comments or feedback you may have related to this feature.*	As above in section 1(c) APPrO believes that zonal minimum capacity should be set by electrical system constraints. APPrO would further discourage the IESO from relying on reliability-must-run (RMR) contracts (with existing resources) except in specific instances where resource adequacy cannot be met within a specific zone within the required timeframe. The use of RMR contracts with existing

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			resources discourages appropriate investment by suppressing scarcity pricing, further exacerbating the supply issue. APPrO would encourage the IESO to expeditiously complete and publish the results of their assessment of the possible capability/contribution from the interties to supply capacity to meet Ontario's resource adequacy. At present, this is a material uncertainty to existing suppliers and developers of new resources. Capacity imports from each interconnection could support Ontario's system level as well as zonal level adequacy needs. The study should take into account the amount of capacity import support that can be relied upon from each interconnection at their respective determined capacity values. This study is critical in determining the future supply demand balance and in defining when and where new capacity may be required. Given the long lead time required for new or upgraded/expanded capacity, it is in the interest of the IESO to provide this information as soon as possible in order to provide appropriate investment signals to investors. Additionally, the IESO should: define the intended process if zonal minimum capacity is not reached.

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	(4) Deliverability *Slides 53-60*	*Please provide any comments or feedback you may have related to this feature.*	Deliverability within Ontario: APPrO believes that deliverability of capacity within Ontario from a specific resource to the system should include system-wide deliverability and/or deliverability within the resource's local zone (similar to ISO-NE). Qualification of capacity from external resources (imports) should take into consideration deliverability to the interties and the intertie capacity values. The rules surrounding the resource connection rules for capacity resources need to be established expeditiously. This is a important first step to provide clarity to developers to support investment. Are resource studied individually or in clusters and how are queueing rules established? What are the rules, timelines, etc.? APPrO agrees with the IESO's position that once deliverability rights have been granted, they should be maintained by the IESO in perpetuity without charging the generator for any future network upgrades. However, APPrO believes that in a properly functioning capacity market the connection room should only be maintained until the point at which the resource is delisted or retired with time allowance to allow for the resource to rebuild. The appropriate time must be discussed and stakeholdered.

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			A key question that is unique to Ontario is whether or not the IESO intends to apply the capacity deliverability rules equally to ICA market participants and non-ICA capacity (i.e. capacity under contract or rate-regulation) resources? For deliverability of capacity imports to Ontario the IESO should require capacity imports to have the equivalent of firm transmission rights to the intertie. The methodology for determining UCAP must be applied consistently between internal and external resources. In addition, APPrO believes that the IESO needs to stakeholder whether or not system backed capacity imports can be qualified capacity alongside unit backed capacity imports and the different rules that may need to apply to either of these capacity imports.
	(5) Locational Clearing *Slides 61-66*	*Please provide any comments or feedback you may have related to this feature.*	APPrO supports the need to establish an approach to reflect locational constraints in auction clearing outcomes. With respect to the two approaches proposed, APPrO supports Approach #2 - the use of using a location-specific downward sloping demand curve to reflect locational constraints in auction clearing outcomes.

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Proposed Approach for Demand Curve Development ***(The Brattle Group Presentation)***		**QUESTION 1:** What unique features of Ontario's market should be accounted for when developing the ICA demand curve? **QUESTION 2:** What questions do stakeholders have about proposed model approach? **QUESTION 3:** What specific metrics should be used to evaluate demand curve performance? **QUESTION 4:** What specific demand curve shapes or performance questions would be helpful to evaluate? **QUESTION 5:** What scenarios would be helpful to evaluate?	In the presentation, *Objectives to Consider in a Demand Curve* Brattle notes on slide 12 that stakeholders in New England engaged in an iterative, collaborative process with ISO-NE to identify and evaluate a range of potential demand curves and that the final ISO-NE proposed curve was a consensus recommendation within the workable range, and reflecting a balance of design objectives. Given this experience please confirm that the current IES process is but a first step in a similar process. **Question 1:** The development of the demand curve for Ontario needs to consider the fact that Ontario's current policy is to reduce the use of and future development of carbon emitting resources. Net-CONE should be based on a non-emitting resource type if there are no prospects for the development of carbon-emitting resources in Ontario. The other major consideration in the Ontario context is the fact that this is an incremental capacity auction versus an auction where all capacity resources participate. The vast majority of capacity resources will be outside the ICA. As a consequence, there will be tremendous volatility

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			in the year to year volumes that will participate in the ICA. The modelling work must consider capacity supply shocks reflecting the entirety of capacity resources and not just those a future ICA. **Question 2:** APPrO has the following questions: • What reference technologies are being evaluated? Has there been any experience in other capacity markets of utilizing a reference technology other than one based on gas fired generation? Please note the following: Historical rulings at the FERC (Federal Energy Regulatory Commission) in the United States on capacity markets have determined that CONE needs to be set on resources that can be implemented in the forward period: "The type of resource used to define CONE has historically been an artifact of the type of unit that could be built in a reasonable amount of time, and would be financially viable, at the time parties developed the current capacity markets, i.e., a gas-fired combustion turbine or a gas-fired combined cycle unit."[2]

[2] https://www.ferc.gov/CalendarFiles/20130826142258-Staff%20Paper.pdf, page 32

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			APPrO firmly believes that for a properly functioning capacity market to deliver value for ratepayers' money, the reference technology selected must be developable, financeable, and permittable within the forward period at the lowest cost. Failure to design a reference technology that follows this principle will result in a future ICA where the desired technology resources fail to clear the ICA. • How sensitive is the study to the reference technology? • How relevant are the results in the absence of the confirmation of the reference technology? **QUESTION 3:** Important metrics that should be used to evaluate demand curve performance include: • average ICA clearing price and cost to the ratepayer; • price standard deviation and frequency at the cap price; • average LOLE ("Loss of Load Event"); • average reserve margin; • reserve margin standard deviation; • frequency below the 1 in 10 LOLE; and, • frequency below the 1 in 5 LOLE.

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			QUESTION 4: Given the results of the work in ISO-NE and the lack of any current basis for Ontario it would make sense that the IESO should study the same subset of demand curves that ISO-NE reviewed. Without further comprehension of demand curve development and implications as well as study and stakeholdering with detailed design choices, APPrO believes that it can't really suggest alternatives at this time. **QUESTION 5:** APPrO recommends that the IESO evaluate various scenarios of market size, levels of participation, imports, exports and asset mixes. APPrO continues to advocate for an independent, robust governance model in light of market renewal. Governance or lack thereof is a critical component and will affect the willingness of developers to participate in, and to finance new and incremental power projects at reasonable rates of return. The ICA must be capable of sustaining resources with existing contracts following the contract term as the IESO is currently assuming the inclusion of these resources into the capacity market (once off contract). The study of minimum capacity prices required to sustain these resources will be critical to determining the floor price for the ICA. In

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			general, including fixed costs structures and need for those plants to recover those costs along with incremental investment costs going forward should encourage such a resource to competitively participate in the auction.
Market Power Mitigation	(1) Physical Withholding *Slides 75-83*	**RECOMMENDATION:** The IESO recommends that a must-offer requirement into the capacity auction is implemented to help mitigate for physical withholding If stakeholders agree with this approach, the next step will be to determine which resources will be required to offer into the auction.	APPrO reserves comment until the full scope of rules in detailed design are made available including but to not limited to: 1. Auction design, including auction price cap, price floor, methodology, etc. 2. Dynamic and static (full and partial) de-list rules 3. Treatment of upgrades (new capacity) and whether or not this portion is under the obligation until it clears an ICA or is free to offer to elsewhere. 4. Pay-for-Performance and Pay-for-Availability 5. Etc. APPrO followings responses below are based on acceptable definition of items identified above.
		QUESTION: Under a must-offer obligation into the capacity auction, what type of exemptions may be appropriate to consider?	APPrO generally supports the approach undertaken by ISO-NE with respect to exemptions whereupon resources are required to submit a de-list bid specifying a price in which they will be

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			"swept out" of the descending clock (assuming this is the selected choice by the IESO) auction (this also applies to existing capacity resources that wish to permanently retire). However, the following definition or clarification of the full set of must-offer rules is required, including: • A clear definition of physical withholding • At what price is must-offer set, at a de-list price, at the price cap, is it determined for each resource or zone? • What are the rules for exiting a capacity obligation (i.e. de-list rules), in full or in part • Are risk premiums for penalty factors in the auction price cap? • What are the performance penalties, and are these considered in the de-list and price ceiling rules? • What are the performance penalties and are these considered in the de-list and price ceiling rules? • Treatment of planned outages, refurbishment/replacement and retirement resources whether in part or full • Will a resource that does not have a capacity commitment to Ontario (but does to a neighbouring jurisdiction) be subject to this rule?

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			APPrO believes a fully functioning governance structure needs to be determined in light of market renewal to enable successful outcomes in the ICA.
	(2a) Economic Withholding - Methodology *Slides 85-92*	**NEXT STEPS:** The IESO, taking into account stakeholder input, will determine the methodology for the ICA The methodology should ideally result in: • Efficient incentives • Market outcomes consistent with competitive participation • Minimal market intervention	How does the IESO propose to evaluate going forward costs for existing assets, and who makes the decision on de-list criteria and decisions? How does the governance process tie into this? APPrO notes that it is critical that there not be any discrimination for balance sheet versus non-recourse project financed resources. Going forward costs should reflect all reasonable operating costs and costs associated with invested capital, both return on total invested capital as well as return of capital over the reasonable expected economic life of the asset.
	2(b) Economic Withholding – Reference Level Determination *Slides 93-97*	Please identify preferred option and provide supporting rationale: **OPTIONS:** 1. Cost submissions assessed by, and reference levels determined by, an independent third-party 2. Cost submissions assessed by, and reference levels determined by, the IESO (likely involving third party consultation)	OPTION 1 is needed as the IESO is the buyer in this case and is conflicted. In this case, APPrO believes that an independent third party consultant would be an existing major accounting firm licensed to practice in Ontario and not conflicted or otherwise under contract with the IESO or the Ontario Government. **Question 1:** An independent third party should also determine reference levels. APPrO believes that the IESO is conflicted as the sole buyer of

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		QUESTION 1: Who should determine the reference levels for the ICA? **QUESTION 2**: With what frequency should reference levels be determined? **QUESTION 3**: What process should exist for dispute resolution of reference level determination?	capacity from the ICA, and thus the only way to remove this conflict is through a third party. **Question 2:** Yearly for each auction, to capture periodic fluctuation in reference levels due to changing costs. **Question 3:** APPrO has stated during the course of the MRP and the ICA workstream that the issue of governance and decision-making needs to be addressed, including the process for dispute resolution. Currently, Ontario's wholesale electricity market lacks a governance structure that would support the implementation of a capacity market. Independent operation of the market is an essential component of any capacity market as this drives investor confidence and ultimately the success (or failure) of the ICA. APPrO urges the IESO to establish a separate stakeholdering process dealing with decision-making, market rule amendment and dispute resolution processes. It should also be acknowledged that it may be necessary to engage and consult with other agencies (i.e. OEB). In APPrO's opinion all matters associated with decision-making authority should be in scope and the IESO should not limit these very important

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			discussions on governance if market renewal – and the ICA – are to be successful.
		NEXT STEPS: The IESO, taking into account stakeholder feedback, will make recommendations on reference level determination	APPrO looks forward to reviewing these recommendations based on submitted feedback above.
	(2c) Economic Withholding – Managing Auction-Related Information *Slides 98-101*	An appropriate amount of information should balance potential benefits (more efficient participation) against potential costs (commercial sensitivities and increased exposure to the exercise of market power) **QUESTION 1:** Do stakeholders have any comments on the type of information that should be made available before, during and following each auction?	APPrO firmly believes that more information is required urgently to attract investment in Ontario. Proponents need to have the ability to attempt to forecast what would happen in the auction or develop possible scenarios in order to develop, finance, permit, and operate resources under an ICA. This includes but is not limited to: LTEP planning modules and data, UCAP ratings for all generators (including those in and out of the ICA), capacity ratings for all external interties, the definition of capacity zones and the capacity value of the ties between the internal capacity zones, determination of an ICR (meeting a 1:10 LOLE), listing of total resource qualification, etc.

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	(3) Inefficient Suppression of Capacity Auction Prices *Slides 102-111*	<u>SUBSIDIZED ENTRY RISK</u> **QUESTION 1:** If a MOPR mechanism is implemented to alleviate any price suppression concerns, what type of exemptions may be appropriate? <u>TARGET CAPACITY RISK</u> **QUESTION 2:** Aside from well-documented processes for determining the target capacity, are there any additional mechanisms that stakeholders think the IESO should consider to help alleviate any concerns?	**Question 1: Subsidized Entry Risk** Exemptions may be appropriate for site specific project agreements that provide for lower costs than assumed in the reference price for items such as property taxes, utilities (that are not electricity related), etc. APPrO firmly believes that this must be thoroughly stakeholdered in order to provide for robust confidence in the ICA in order to attract investment. Given Ontario's unique structure with the IESO as a single capacity buyer, could the IESO elaborate on how a MOPR would be implemented or how it could affect the market? **Question 2: Target Capacity Risk** APPrO is of the view that the IESO urgently needs to address issues of governance and decision making to enable a fully functioning ICA including but not limited to the alleviation of concerns that the correct amount of target capacity is selected.
		NEXT STEPS: The IESO will explore these issues in more detail along with stakeholder feedback and identify potential options that may work in the Ontario-context	APPrO looks forward to reviewing these options in light of submitted stakeholder feedback.
Cost Recovery	(1) Customer Base *Slides 118-121*	**RECOMMENDATION:** Recover costs from internal loads only (i.e., Option 1 or 2, not including exports)	APPrO supports option 2 (customer base should reflect all internal loads, including load displaced

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			by embedded generation) brings discipline to the marketplace. All load that is served by the ICA and that benefits from it pays. Embedded generation can earn capacity revenues in the ICA in accordance with its capacity contribution based on ICA qualification requirements. APPrO notes that current Local Distribution Companies do not currently have a load supply obligation.
		NEXT STEPS: The IESO will work with relevant parties to determine whether or not load displaced through embedded generation should be included in the customer base	APPrO looks forward to reviewing these options in light of submitted stakeholder feedback.
	(2) Zonal vs. System-Wide Allocation *Slides 122-125*	**NEXT STEPS:** The IESO will work with relevant parties to determine whether costs should be allocated on a zonal or system wide basis • Will need to consider inter-related design elements and anticipated outcomes from other MRP streams (e.g., load pricing methodology under SSM) • If the zonal option is selected, will need to consider how to allocate costs within a zone as part of the detailed design	At this time, it is APPrO's view that this question would be best answered by internal load representatives. Further APPrO would note that comment on this could be dependent on the determination of capacity zones.
	(3) Allocation Methodology *Slides 126-128*	**NEXT STEPS:** The IESO will work with relevant parties to determine the appropriate capacity cost allocation methodology to be used for recovering ICA costs	At this time, it is APPrO's view that this question would be best answered by internal load representatives. Further APPrO would note that

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			comment on this could be dependent on the determination of capacity zones.

General Comments/Feedback:

With respect to capacity export rules (and this will likely be discussed in the capacity exports work stream; however, it intersects with the ICA), APPrO would like to understand what are the capacity export rules and how do they apply to non-ICA (i.e. those under contract or rate regulation) and ICA resources? APPrO believes that those resources who no longer clear the Ontario ICA (either in full or in part) and consequently no longer have a capacity supply obligation to Ontario (either in full or in part) and who request that they be allowed to export their available capacity should be given priority on the interties. The rationale is that these resources will have a greater risk from pay-for-performance or pay-for-availability rules as well as risk on return of and on invested capital versus contracted or rate regulated resources. This is a unique feature to Ontario due to the "incremental" nature of the capacity auction.

APPrO would like to note that each of the topics of locational considerations, demand curve development, market power mitigation and cost recovery have significant ramifications to participants and were the result of extensive work and individual stakeholdering processes over extended periods in other jurisdictions. For many participants in the Ontario ICA stakeholder sessions, capacity auctions are new and require research and comprehension before meaningful comments or input can be provided. Except for those entities that have operated in other jurisdictions, there is no experience base to draw from in Ontario.

Furthermore, as previously stated by APPrO, transparency is critical to the success of the ICA. The IESO should consider expediting information to future participants in the future ICA in order to inform stakeholder comment and allow the maximum amount of time to develop future capacity supply options. This would include engaging the Ministry of Energy to encourage the prompt release of the LTEP modules.

Lastly and as already stated in this and other APPrO submissions, governance remains a critical issue for market renewal and the ICA as it is key to investor confidence. How this issue is managed will directly impact the success or failure of the ICA and whether or not it can credibly claim that it can meet any of its objectives.