

# Incremental Capacity Auction (ICA) – Stakeholder Feedback Form

Stakeholder Meeting: March 7<sup>th</sup>, 2018

<b>Date Submitted:</b> <i>YYYY/MM/DD</i>	<b>Feedback provided by:</b> Company Name: <u>    APPrO<sup>1</sup>    </u> Contact Name: <u>    Dave Butters    </u> Phone: <u>                                    </u> Email: <u>                                    </u>
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The IESO held the sixth meeting of the ‘Options Phase’ of the Market Renewal – Incremental Capacity Auction engagement on March 7<sup>th</sup>, 2018.

<sup>1</sup> 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 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 **April 13, 2018** to [engagement@ieso.ca](mailto: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
<b>STAKEHOLDER FEEDBACK – DECEMBER 4 DESIGN ELEMENTS</b>			
<b>Length of Forward Period</b>	(1) Length of the Forward Period	<p>Decisions made need to consider holistic risk allocation (e.g. Rebalancing Auctions, forecasting uncertainty, obligations, etc.)</p> <p><b>PRELIMINARY DECISION:</b> The length of the forward period should be three and a half years</p> <p><b>NEXT STEPS:</b> The IESO will establish the exact months in which the forward period will start and end as part of the Detailed Design considering the decisions made related to Commitment Periods</p>	<p>The IESO’s selection of three and half years is less than the period recommended by APPrO. APPrO’s proposed length of four and half years was premised on the basis of a reasonable timeline for permitting and approvals, construction and commissioning following successful clearing in an auction. We appreciate the trade-offs of risk and cost that the IESO evaluated and we support the IESO initiative of converging the multiple variables in play in the market design to allow concrete steps to be taken toward an overall design. By committing to the forward period of three and a half years, the IESO has placed a marker which allows stakeholders to concentrate on the other design elements that are intrinsically connected to it.</p> <p>The rationale provided by the IESO on the selection of the forward period included an evaluation of the average period that had been utilized in the contracts let by the IESO/OPA over the past decade. Further, the IESO has pointed out that a forward period of three and a half years is not inconsistent with the forward periods in other capacity markets.</p> <p>We think its important to comment on the contrast between a capacity auction and long term contracts and compare Ontario with other markets as it helps to articulate the importance of the other elements that the IESO needs to develop to advance the maturity of the proposed ICA.</p>

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			<p>APPPrO notes that historically IESO (OPA) procurements included force majeure provisions which commensurately reduced the risk of development with respect to the permitting process. APPPrO firmly believes given the selection of a forward period of three and a half years, that force majeure provisions will be needed in the ICA to offset potential regulatory risk of delay. APPPrO requests the IESO provide information on whether force majeure provisions will be incorporated into the ICA.</p> <p>Suppliers of new capacity in the previous OPA/IESO procurements were prepared to accept certain risks in preparing development plans on the basis of the probability of winning a long term contract. The long term contract reduced the developer’s risks of revenue certainty and governance. The developer’s risk then amounted to defining the competition and evaluating how much expenditure was prudent to win the contract and be capable of meeting the contract commercial operation date (“COD”).</p> <p>In contrast, a supplier in a capacity auction faces the same competitive and governance risk as under the previous procurements (and likely more given the variety of suppliers) and has to assess the additional risks of achieving forecast market revenues and the potential for rule changes or other changes to the marketplace without the strength of a contract.</p>

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			<p>With the IESO limiting the forward period to three and a half years, it is now critical that the IESO address the other elements necessary for the ICA to be successful.</p> <p>To enable a supplier to assess the risks of achieving market forecasts the IESO must increase the level of transparency with respect to information it possesses and plans to create. As a start, APPrO is encouraged that the LTEP modules as promised by the Ministry of Energy in October of 2017 were recently released.</p> <p>APPrO reiterates that all information regarding future supply and demand need to be made public and the IESO needs to complete several critical studies including an Integrated Resource Plan (or Integrated Power System Plan). A study of the capacity values of the interties is needed urgently.</p> <p>The supplier needs to understand its risk with respect to changes in rules. Investors want to ensure that, should they be adversely affected by a rule change or other market decision, that there is a fair and transparent process and unbiased third party in which to appeal. In the US markets this is typically the FERC. A FERC equivalent is required for Ontario to make ICA real.</p>
	(2) Timing of the Base Auction	<b>NEXT STEPS:</b> The IESO will take this feedback into consideration when establishing the timing of the base auction as part of Detailed Design	APPrO believes that the timing of the base auction must consider Ontario specific factors such as winter construction which may further limit the forward period. Based on the preliminary decision

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			to make the commencement period start in the Summer, APPrO believes that the latest the base auction can occur and render a firm commitment is in October to provide a three and a half year forward period. The IESO may further wish to take into consideration timing of capacity auctions in other jurisdictions.
<b>Commitment Period</b>	(1) Seasonal vs. Annual Obligations	<p>Other jurisdictions originally started with an annual design, however have since been trying to reflect evolving seasonality aspects using “bolt-on” solutions • A switch to ‘Seasonal’ construct would be more challenging in the future</p> <p><b>PRELIMINARY DECISION:</b> Implement seasonal Obligation Periods (i.e. seasonal offers cooptimized across a one year period),</p> <p><b>NEXT STEPS:</b> The IESO will determine the details related to Seasonal Obligations as part of the Detailed Design</p>	For the reasons described in our comments to the IESO in our submission related to the December 4, 2017 ICA materials, APPrO is supportive of the preliminary decision to move forward with seasonal obligations. Ontario, where possible, should leap-frog other market designs and move forward with the best design for Ontario which would include seasonal obligations.
	(2) Timing of the Commitment Period	<p><b>PRELIMINARY DECISION:</b> The Commitment Period will start during the summer period to align with neighbouring jurisdictions</p> <p><b>NEXT STEPS:</b> IESO will determine the exact months that fall into each season as part of the Detailed Design (in alignment with the Obligation Period(s))</p>	APPrO is supportive of the IESO’s preliminary decision to have the commitment period start during the summer period.

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<p><b>Multi-year Commitments</b></p>	<p>(1) Eligibility   <i>Slide 21 (also see Dec 4<sup>th</sup> SE deck)</i></p>	<p><b>NEXT STEPS:</b> Specific criteria will be established during Detailed Design</p> <p><i>Please provide any additional comments or feedback you may have related to this feature.</i></p>	<p>As per APPrO’s submission with respect to the December 4, 2017 ICA materials, APPrO believes that eligibility for Multi-Year Commitments should largely follow ISO-NE. Eligible projects would include new, uprated, repowered, or re-established resources and eligible resource types would include generators (excluding renewables), imports requiring transmission upgrades. Unlike ISO-NE, APPrO would recommend that demand resources are not eligible.</p> <p>Existing resources would have to meet the following requirements to qualify as new (subject to an investment threshold):</p> <ol style="list-style-type: none"> <li>1. Incremental - refers to when capacity is increased between 2 and 20 percent of existing Qualified Capacity (or less than 40 MW); only the incremental amount can qualify as new</li> <li>2. Uprates - refers to existing resources that increase output by the greater of 20 percent or 40 MW above existing Qualified Capacity; the entire resource can then qualify as new</li> <li>3. Repowering – investment into repowering is equal to or greater than a certain amount per kilowatt</li> <li>4. Reestablishment – existing resources that have been de-rated for over three years</li> </ol>

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	<p>(2) Length of the Multi-year Commitment</p> <p><i>Slide 21(also see Dec 4<sup>th</sup> SE deck)</i></p>	<p><b>NEXT STEPS:</b> The maximum length of the MYC will be determined as part of the Detailed Design, taking into account other considerations including the approach taken on when and how MYCs would be available</p> <p><i>Please provide any additional comments or feedback you may have related to this feature.</i></p>	<p>APPRO believes that the IESO should consider the design of an auction which is flexible with respect to the length of the Multi-Year Commitment. APPRO’s proposed structure (described below) assumes that the auction construct includes multiple rounds (in a descending clock auction) or multiple bid responses (in a sealed bid auction) with declining prices for longer commitment period lengths once a stack of resources exceeding the minimum capacity supporting an installed capacity requirement has been established.</p> <p>In the proposed construct, the auction algorithm would begin with a stack of resources consisting of resources bidding a one-year Commitment Period. If the resources that clear are insufficient to meet the minimum capacity defined by a LOLE target of 1 day in 5 years, then the auction algorithm would be re-run to include resources with progressively longer Multi-Year Commitment length for new eligible resources. If resources that clear are still insufficient, then the Multi-Year Commitment length would be increased incrementally (propose in 2 year increments) until there are sufficient resources to meet the LOLE of 1 day in 5 years. Assuming the stack cleared is in excess of the demand curve, subsequent auction rounds would reduce price.</p>



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			<p>The proposed construct minimizes the duration of the Multi-Year Commitment and clearing price simultaneously. New eligible resources would be incentivized to reduce the length of their Multi-Year Commitment to a minimum to ensure they clear the auction as soon as possible. If the stack of resources expands to include longer Multi-Year Commitments, then the new eligible resource should have the ability to remain in the auction as its clearing price is reduced assuming its cost structure is amortized over longer durations. The proposed construct allows discovery on both term and price.</p> <p>The duration of Multi-Year Commitment could change from year to year. For example, in the early years where there is excess available capacity assumed there may not be any need to reach to the Multi-Year Commitment resources. APPrO believes that the maximum Multi-Year Commitment length should be 15 years. If there are insufficient resources to meet the minimum required capacity at 15 years, then the IESO should consider an alternative mechanism to the capacity auction to procure resources.</p> <p>At the ICA session, the IESO indicated that they were leaning towards a sealed-bid versus</p>

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			<p>descending clock auction mechanism. Could the IESO please provide the rationale as to why a sealed-bid is preferred over a descending clock option in Ontario versus other jurisdictions such as ISO-NE which continues to use a descending clock option?</p>
	<p>(3) Price Formation</p> <p><i>Slide 22(also see Dec 4<sup>th</sup> SE deck)</i></p>	<p><b>NEXT STEPS:</b> Details around price formation will be determined as part of the Detailed Design</p> <p><i>Please provide any additional comments or feedback you may have related to this feature.</i></p>	<p>As previously submitted on the December 4<sup>th</sup> materials, APPrO reiterates its position:</p> <p>APPrO would recommend the IESO proceed with a Multi-Year price formation based on the of ISO-NE template. Resources that have a Multi-Year Commitment are paid for each year on the basis of the first year market clearing price (indexed for inflation) for the lock in duration. There are two possible treatments for how such resources are incorporated into future auctions. ISO-NE requires resources that have a Multi-Year Commitments to be price takers (i.e. zero offer) which can lead to price suppression effects and future volatility. In the UK, resources that have a Multi-Year Commitments are excluded from the auction and accounted for in target capacity. Its unclear what the material difference is between the two methodologies. APPrO recommends that the IESO model both effects to determine the optimal.</p>
	<p>(4) Availability</p>	<p><b>QUESTION:</b> Under what circumstances should Multi-year Commitments be available?</p>	<p>APPrO supports and recommends the IESO move forward with Option 1.</p>

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	<i>Slides 19-20</i>	<p><b>QUESTION:</b> How should resources seeking multi-year commitments compete against those seeking an annual commitment?</p>	<p>This option allows the ICA to signal when new resources are competitive by adding incrementally longer Multi-year commitment resources to the supply stack and incrementally reducing capacity price. APPrO believes that Option 1 appropriately balances risk. Option 1 will provide a structure that will in itself signal when there is need for a Multi-Year Commitment based on the Installed Capacity Requirement (ICR) and the demand curve while providing stability for new investment which is needed to invest prior to the auction based on the selected forward period of 3 ½ years.</p>
		<p><b>NEXT STEPS:</b> The IESO will consider stakeholder feedback and availability considerations in other jurisdictions and will propose an approach to availability for MYCs as part of the HLD</p>	<p>APPrO looks forward to seeing the IESO’s proposed approach on this subject. APPrO notes that other decisions in the ICA process, including selection of the forward period which requires developers to invest prior to an ICA, will impact the incentive for resources to participate and need to be considered in the IESO’s decision on how resources seeking multi-year commitments compete against those seeking an annual commitment. .</p>
<b>MARCH 7 DESIGN ELEMENTS</b>			
<p><b>Forward Period</b></p>	<p>(1) Completion Security  <i>Slides 32-39</i></p>	<p><b>NEXT STEPS:</b> The IESO will consider stakeholder feedback, and as part of the HLD will communicate the approach for determining the</p>	<p>It is APPrO’s recommendation that completion security be posted 10 business days prior to the auction and subsequently adjusted based on the clearing price. APPrO believes that the Completion</p>

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<b>Obligations &amp; Implications</b>		amount of, and the general timelines for providing, Completion Security <ul style="list-style-type: none"> <li>• Detailed timelines, format for providing Completion Security, and related implications will be determined as part of the detailed design</li> <li>• The requirements will likely be aligned with existing related processes and policies currently outlined in the Market Rules</li> </ul>	Security based on the initial price cap should be posted prior to an auction in order to ensure that all Participants are serious, to ensure that all Participants and willing to post the security, and to ensure a competitive auction which sets price for all cleared Participants.  APPrO believes that the completion security should then be adjusted based on the auction clearing price (i.e. 8-20% of annual price) and be increased with each subsequent auction, like the ISO-NE and PJM markets. This is because as time progresses towards the year in which the capacity supply obligation begins, it becomes increasingly difficult and expensive for the IESO to procure replacement capacity should the resource default on its obligation or be late as the IESO may procure more expensive capacity higher in the supply stack in rebalancing auctions. The IESO should not reduce security until commercial operation date (COD) is achieved, for the same reasons.
	(2) Project Milestones  <i>Slides 40-51</i>	<b>RECOMMENDATION:</b> The IESO proposes that project milestones should be established as part of the requirements during the forward period	

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		<p><b>NEXT STEPS:</b> The IESO will consider stakeholder feedback and will determine which project milestones will be mandatory during the forward period, how milestones will be assessed/monitored, and the implications that will apply for failure to meet defined milestones</p> <p><b>QUESTION:</b> What milestones do stakeholders feel are important for the IESO to track to ensure projects reach commercial operation by the Commitment Period?</p> <p><b>QUESTION:</b> What type of assessment should be used to determine whether milestones are being met (e.g., reports, IE certificates, etc.)</p> <ul style="list-style-type: none"> <li>• How often should reports be required and what information should these contain?</li> </ul> <p><b>QUESTION:</b> What type of implications (e.g., termination, financial implications, etc.) should apply if participants fail to meet key project milestones?</p>	<p>It is APPrO’s opinion that there should be very few milestones during the forward period.</p> <p>As mentioned above, there should be limited milestones during the forward period and these should include:</p> <ul style="list-style-type: none"> <li>(i) Permitting;</li> <li>(ii) Financing;</li> <li>(iii) Start of Construction; and</li> <li>(iv) COD.</li> </ul> <p>In APPrO’s view, the developer should provide quarterly milestone update reports to the IESO (nothing too onerous) as to the status of each milestone and the project, along with audit rights for the IESO to step in and review project progress. If milestones are not met, the IESO should not terminate the capacity obligation but instead should require the developer provide an action plan and timeline to meet the missed milestones to meet COD. Only if a developer fails to meet COD and does not replace the obligation or does not have a valid force majeure event should the IESO:</p> <ol style="list-style-type: none"> <li>1. draw the security;</li> </ol>

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			<p>2. require the developer to replace that capacity until able to meet COD (but not extend the end date of the Commitment Period)</p> <p>3. terminate the Commitment if the developer is more than 18 months late.</p> <p>APPRO believes that the IESO should establish reasonable force majeure provisions that either allow the supplier to terminate their commitment or to extend the start and end dates of the commitment, subject to reasonable limitations.</p>
	<p>(3) Capacity Check Test</p> <p><i>Slides 52-56</i></p>	<p><b>NEXT STEPS:</b> The IESO will consider assessments performed as part of the capacity qualification process and those available during the Commitment Period, the applicability of testing procedures used in other jurisdictions, as well as stakeholder feedback to determine whether a capacity check test will be required during the forward period</p>	<p>APPRO supports periodic capacity check test requirements during the capacity Obligation Period, including a mandatory capacity check test just prior to or immediately after the beginning of commercial operation, as well as for existing facilities to evaluate their baseline performance prior to uprates in the qualification period.</p> <p>APPRO believes that ongoing periodic testing should be applied to all dispatchable resource types equally and with sufficient frequency (i.e. annually) to ensure reliability, with consideration to increasing frequency based on any historical non-performance of individual resources. Variable generation should be based on historical</p>

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			<p>performance and a determination of the resources Equivalent Load Carrying Capability (ELCC), as per APPrO’s previous submissions on this matter.</p> <p>The capacity check tests provisions should be similar to capacity check test provisions in existing CES contracts as existing generators are familiar with and understand these provisions.</p>
<p><b>Rebalancing Auctions</b></p>	<p>(1) Frequency of Auctions</p> <p><i>Slides 67-72</i></p>	<p><b>OPTIONS:</b> The IESO could hold one, two, or three rebalancing auctions ahead of the Commitment Period</p> <p><b>RECOMMENDATION:</b> The IESO proposes to establish rebalancing auctions during the Forward Period (up to a maximum of three)</p> <p><b>NEXT STEPS:</b> Based on stakeholder feedback and linkages to other rebalancing auction features, the number of rebalancing auctions will be determined (i.e., one, two or three auctions)</p>	<p>With the proposed options put forward by the IESO, and similar to both ISO-NE and PJM, APPrO recommends 3 rebalancing auctions in advance of the Commitment Period. The first one would allow resources to pickup or relieve their positions based on initial development, the second would serve as a mid-point based on construction changes, and the third would allow for a final opportunity for new resources based on the near-end of construction and commissioning.</p>
	<p>(2) Timing of Auctions Relative to the Commitment Period</p> <p><i>Slides 73-77</i></p>	<p><b>NEXT STEPS:</b> The timing of rebalancing auctions will be determined taking into account stakeholder feedback and informed by:</p> <ul style="list-style-type: none"> <li>• The length of the forward period</li> <li>• The number of rebalancing auctions established</li> </ul>	<p>APPrO believes, that similar to ISO-NE and PJM and for the reasons stated above in section (1) Frequency of Auctions, the first rebalancing auction should be held 20-24 months prior; the second approximately one year; and, the third/final auction 3 months prior to the Commitment Period. Further specific timing</p>

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		<ul style="list-style-type: none"> <li>• Obligations/implications within the forward period</li> <li>• Opportunities for out-of-market actions if the final rebalancing auction clears below the Minimum Capacity Limit</li> </ul>	selection could be determined at the detailed design stage.
	(3) Rebalancing Auction Clearing  <i>Slides 78-83</i>	<b>NEXT STEPS:</b> As part of the detailed design, the IESO will develop the methodology for establishing the demand curve used in rebalancing auctions	APPrO looks forward to reviewing the methodology established, and supports the ability to update net changes in the amount of capacity procured due to reasonable changes in the Target Capacity or Outcomes of the downward sloping demand curve based on the initial ICA or subsequent rebalancing auctions for each supply period. APPrO believes that the issue of governance would be critical to ensure that participants in the ICA would have confidence in the reasonability and rationale for any changes.
	(4) Participation Requirements  <i>Slides 84-88</i>	<b>NEXT STEPS:</b> Eligibility criteria and the Qualified Capacity process will be established for the base and rebalancing auctions	APPrO recommends the same criteria should be used in both the base and rebalancing auctions since a resource procured either in the primary ICA or in rebalancing auctions has the same obligation to fulfill reliability requirements for the IESO.



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	(5) Obligation Transfers between Participants  <i>Slides 89-93</i>	<p><b>OPTIONS:</b></p> <p><b>(1)</b> In addition to holding rebalancing auctions, allow for the transferring of obligations within defined windows</p> <p><b>(2)</b> Allow for the trading of obligations only through the rebalancing auction mechanism</p> <p><b>NEXT STEPS:</b> The IESO, considering stakeholder feedback, will weigh the potential benefits that transfers between participants can provide against the complexity of administering this functionality in order to make a determination on this feature</p>	<p>APPRO believes that the IESO should provide maximum flexibility for resources to pick up or relieve a portion of their obligation to hedge risk, outages, or other events on a short-term basis as they arise during operations. This should result in more stability and consequently less risk premiums and lower prices in the capacity auction.</p>

**General Comments/Feedback:**

Like the decision on the length of the forward period, the selection of the reference technology for Net-CONE is a fundamental building block for the market design. We encourage the IESO to make this decision as soon as possible as this will have direct bearing on capacity market forecast pricing, technologies for development, siting, permitting and approvals, and construction lead times. It would also substantially reduce the analysis of market outcomes and accelerate the development of the detailed market design.

Also, fundamental to the types of projects developed and early investment is the decision on multi-year commitment periods. Major new investment in a new and immature capacity market like Ontario is unlikely to occur without a mechanism to permit investment recovery over an extended period of time. If these risks to investment recovery are not considered, APPRO believes that either the auction will be short, because investors are unwilling to accept the risk of single year capacity auctions and potentially requiring the IESO to resort to emergency supply procurements, or it will clear at unacceptable prices to consumers as investors try to recover as much revenue as possible in a single year.

Lastly, and as stated in all of APPRO’s past submissions, governance remains a critical issue for the ICA as it is key to investor confidence. How this issue is managed will directly impact the success or failure of the ICA. We encourage the IESO to implement its governance plan as soon as possible.