

Incremental Capacity Auction (ICA) – Stakeholder Feedback Form

Stakeholder Meeting: September 28th, 2017

Feedback request by: 2017/10/26 Date Submitted: 2017/10/26	Feedback provided by: Company Name: _____ OPG _____ Contact Name: __Lynn M. Wizniak_____ Phone: _____ Email: _____
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The IESO held the first meeting of the ‘Options Phase’ of the Market Renewal – Incremental Capacity Auction engagement on September 28th, 2017.

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

Feedback received will be summarized and will help inform further discussions at future stakeholder engagement meetings.

Design Element	Features	Questions for Stakeholders	Stakeholder Feedback
Participation Requirements	(1) Organization Participation and Facility Registration (2) Fees & Deposits (3) Performance Security <i>Slides 15-26</i>	<p>QUESTION: Are there any aspects of the proposed Participation Requirements that would pose an unreasonable barrier to entry for potential participants?</p> <p>QUESTION: What considerations should be taken into account when establishing deposit/security amounts?</p>	<p>The auction deposit / proposal security should be sufficient to discourage proponents from submitting proposals without performing necessary due diligence. The proposal security process used in LRP I was reasonable.</p> <p>Completion and performance security should be based on the clearing price of the ICA.</p>
Resource Eligibility	(1) Ineligible Resource Types <i>Slides 34-39</i>	<p>QUESTION: Are there any concerns with the resource types that have been identified as ineligible?</p> <p>QUESTION: Are there any other resource types that should be ineligible?</p>	<p>The ICA needs to have a mechanism to address contracts that expire within the forward and commitment periods. Facilities that are subject to a generation contract for a portion of the commitment period should be considered for participation / qualification in the ICA for the remainder of the commitment period when they are no longer under contract. This is no different than a new development clearing in the ICA with a staggered in-service date – practically not all resources will be in-service and start the commitment period at the same time.</p> <p>This concern would be minimized if the period between the ICA base auctions or balancing auctions is short – say 6 months or less.</p>
	(2) General Requirements: - New vs Existing Resources <i>Slides 42-43</i>	<p>QUESTION: How should new vs. existing resources be defined under the capacity auction?</p> <p>QUESTION: In addition to facilities that are still to be built, should new resources include: –Existing facilities that have never provided energy</p>	<p>New resources should be defined as those that are still to be build, existing facilities that are providing energy to the grid for the first time and require capital investment to establish this connection, upgrades to existing facilities provided it is a capital investment and existing facilities that are brought back into operation</p>

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		to the grid (e.g., previously Behind-the-Meter Generation/off-grid)? –Upgrades to existing facilities that have uprated by some minimum percentage of their existing capacity or that include capital expenditures of a minimum \$/MW amount? –Existing facilities that have not operated for a number of years and are brought back into operation?	(essentially the list the IESO is seeking comments on with the emphasis on requiring a capital investment). All of these resources should be eligible for multi-year commitments as they require revenue certainty in order to reduce the risk of their financial investment, obtain financing and lower the costs associated with financing. A “short-term price guarantee for multi-years” benefits the customer by lowering the cost of the project and therefore the cost to the customer.
	(2b) Permits and Licensing <i>Slides 46-49</i>	<p>QUESTION: What permits should participants be required to provide to the IESO in advance of the auction?</p> <p>QUESTION: If permits are not required prior to the auction, where should participants be in the permitting process prior to applying? Should the IESO:</p> <ul style="list-style-type: none"> (a) Establish a specific milestone in the permitting process that projects should have reached prior to the auction, or (b) Require that projects have commenced any required permitting process with the onus on the participant to have this completed prior to the commitment period? <p>QUESTION: How should delays related to project permitting be addressed?</p>	Permitting risk is the responsibility of the proponent and the status and communication of permits should not be mandated by the IESO. Elimination of this requirement will lower administrative costs for both the IESO and the proponent. Instead, the auction deposit / proposal security and further completion and performance security should be relied upon to ensure proponents will fulfill their obligations as part of the ICA. This will require these types of securities to be of a sufficient magnitude to ensure that proponents will complete necessary due diligence before submitting proposals and will be motivated to achieve the required in-service date. Delays in project permitting that impact the in-service / commitment date should require proponents to pay for the cost of replacement capacity at the price of the next MW of capacity in the ICA.

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	(2c) Project Milestones <i>Slides 50-52</i>	QUESTION: What type of information should the IESO require related to project milestones?	<p>Proponents should only be required to provide the projected in-service date. The risk of meeting project milestones is the proponent’s and for any delays the proponent should be required to pay for the cost of replacement capacity at the price of the next MW of capacity in the ICA.</p> <p>If critical path schedules are required, similar to the ISO-NE, they should be kept simple and monitored annually only. One benefit from requiring this type of schedule is if the IESO foresees a delay, the proponent could be mandated to purchase the capacity from the next ICA rather than at the end of the forward period. From an operational perspective, a critical path schedule may provide assurance that resource adequacy and reliability needs are appropriately planned for – alternatively this risk could be managed through mechanisms such as the reserve margin.</p> <p>Project milestones, financing, permitting, site access etc. requirements that may need to be provided to the IESO as part of the ICA should only apply to new facilities.</p>
	(2d) Connection Assessment <i>Slides 53-56</i>	<p>QUESTION: What other considerations should the IESO take into account related to connection of new projects?</p> <p>QUESTION: What information, if any, do participants require from the IESO related to connection availability prior to offering into the auction?</p>	<p>Transmission improvements solely due to the project, unless previously identified, should be the responsibility of the project and be part of the critical path schedule.</p> <p>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 <u>frequent open and transparent</u></p>

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			<p>information to keep proponents up to date on any changes and the rationale for these changes.</p> <p>A mandatory requirement for bidding into the ICA should be that the proponent has received confirmation of connection availability from IESO.</p> <p>If conditions change in real time, the IESO should allocate available transmission capacity to ICA proposals based on the lowest price.</p> <p>If a proponent receives a contract through the ICA, but is ultimately not able to receive SIA approval, then the proponent should be relieved of obligations under the ICA and the associated auction deposit / performance security should be refunded.</p> <p>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> <p>Further what is the IESO’s view regarding uprates and existing facilities brought back into operation (Question 2 in this template) 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</p>

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			<p>would this facility queue for transmission availability for the ICA?</p>
	<p>(2e) Project Financing <i>Slides 57-59</i></p>	<p>QUESTION: To minimize risk of the project not being developed, should the IESO require participants to provide project financing information, or rely on prudentials and/or other deposits?</p> <p>QUESTION: If required, what type of information should participants be required to provide?</p>	<p>No, the provision of project financing details is too much administrative effort for both the proponent and the IESO with limited value. This risk is the proponent's.</p> <p>Instead, as discussed before, the auction deposit / proposal security and further completion and performance security should be relied upon to ensure proponents will fulfill their obligations as part of the ICA.</p>
	<p>(2f) Project Development Experience <i>Slides 60-61</i></p>	<p>QUESTION: Should the IESO require participants to demonstrate project development experience? For all projects or only projects over a certain size?</p> <p>QUESTION: How should this experience be demonstrated?</p>	<p>Definitely - participants should be able to demonstrate project development experience in the applicable technology and of a similar scale along with knowledge of specific Ontario legislative, regulatory and permitting requirements that apply.</p> <p>A restriction that experience should be Ontario based may pose a barrier to entry for new technologies that may be evolving in other geographic locations thereby resulting in higher costs. Further, if new developments in other jurisdictions are permitted to import into the ICA it would not be appropriate to limit project development experience to only Ontario.</p> <p>The IESO should minimize administrative costs by reviewing this information upfront and relying on penalties to drive the correct behaviour going forward. Experience could be demonstrated by a listing of the reference projects the proponent was involved in and a clear description of their role.</p>

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	(2g) Site Access <i>Slides 62-63</i>	<p>QUESTION: To minimize risk of the project not being developed, should the IESO:</p> <ul style="list-style-type: none"> (a) Require participants provide information regarding site access, or (b) Rely on non-performance implications to provide the necessary incentives (e.g. loss of deposit, damage charges, etc.) for developers to ensure they only offer in projects that can be developed on time? 	<p>Site access is the responsibility and risk of the proponent. This information should not be required to be supplied to the IESO by the proponent.</p> <p>As stated before, the auction deposit / proposal security and further completion and performance security should be relied upon to ensure proponents will fulfill their obligations as part of the ICA.</p>
	(2h) Project Support <i>Slides 64-65</i>	<p>QUESTION: Should project support be a mandatory (i.e., pass/fail) requirement?</p> <p>QUESTION: If an optional requirement, how should it factor into resource selection? <i>(noting that resource selection would otherwise be based solely on offer price and system constraints)</i></p> <p>QUESTION: If so, what should participants be required to provide to demonstrate project support (e.g., council resolution)?</p>	<p>Project support is important but most documentation of this support has limited value as municipal and aboriginal councils change. If this occurs prior to the in-service date, support for the project may not continue with the next council.</p> <p>Stakeholders can also leverage their support to receive community benefits which will increase the cost of the project.</p> <p>If a factor in the decision, a letter from the municipality, community group or First Nation should be sufficient as it will provide some assurance to the IESO that the proponent has consulted with the community. Consultation requirements associated with the environmental approvals process will also contribute to this assurance.</p>

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	(2) General Requirements: - Questions for Discussion <i>Slide 66</i>	<p>QUESTION: Are there any other general requirements that stakeholders believe participants should be required to meet?</p> <p>QUESTION: Any foreseeable issues as a result of requiring all participants (i.e., various technology types, new vs. existing) to meet the requirements outlined in this feature?</p>	-----
	(3) Resource Specific Requirements: (3a) Energy Storage <i>Slides 68-70</i>	<p>QUESTION: What factors should be considered related to the treatment of energy storage resources in the ICA?</p>	<p>The ICA should be designed to provide equal opportunity for energy storage resources to competitively participate. The auction design may need to be structured to overcome potential barriers to their participation, such as, performance requirements over a large number of consecutive hours and seasonal availability.</p> <p>As these facilities are usually energy limited, the Qualified Capacity they can offer into the ICA may not provide sufficient revenues for their financial viability. This will require these facilities to receive revenues from the provision of other products in addition to capacity; such as, energy, regulation, system flexibility, voltage regulation and operating reserve.</p> <p>As energy storage facilities have the ability to provide a multitude of products, in order to fully recognize this value, there needs to be a market based approach to jointly optimize these interdependent products. This will yield benefits for the system, customer and for the environment by potentially lowering carbon emissions.</p>

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			<p>Joint optimization and coordination of products requires a framework that will allow these assets to be scheduled in the day ahead and real time markets in a manner that optimizes and respects their time-shifting abilities and considers limitations. One design feature could be that in the scheduling timeframe (Day ahead and Real-time) an enhanced Daily Energy Limit (DEL) could be made available for storage facilities. These DEL values could be updated hourly by the IESO scheduling tool based on a user defined efficiency value that links load consumed with energy available from generation over the period.</p> <p>Issues and potential barriers to participation should be identified and discussed in the Non-emitting Resource Sub-committee to the Market Renewal Working Group.</p>
	<p>(3b) Demand Response <i>Slides 71-72</i></p>	<p>QUESTION: How does eligibility need to evolve as resources are transitioned from the DR Auction to the ICA? <i>(recognizing that the ICA will likely procure a different product than the DR Auction)</i></p> <p>QUESTION: Is there anything else the IESO should consider related to the transition of DR resources from the DR Auction to the ICA?</p>	<p>-----</p>
	<p>(3c) Aggregated Resources <i>Slides 73-77</i></p>	<p>QUESTION: Are existing obligations in the Market Rules regarding aggregation sufficient to facilitate desired participation in the ICA?</p> <p>QUESTION: If the IESO was able to upgrade the necessary tools and processes to be able to accommodate smaller resources, what would be a</p>	<p>Aggregation obligations and rules should be consistently applied across all market products and services. As aggregation is permitted in the energy market it should also apply to the capacity market.</p> <p>The Market Rules on this issue need to be flexible as aggregation requirements will need to change to</p>

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		reasonable threshold? (e.g., 100 kW?) QUESTION: Are there any other resource aggregation issues stakeholders would like the IESO to consider?	accommodate new technologies / innovation, net and virtual metering and customer choice.
	(3d) Contracted Resources Issue #1 (Uprates) <i>Slides 80-82</i>	QUESTION: What are potential options for dealing with this issue while ensuring no additional costs to ratepayers under the PPA?	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”) - MNR Policy and Procedure WR 3.02.01 dated October 24, 2008. This approach applies consistency for determining incremental capacity and energy for hydroelectric resources.
	(3d) Contracted Resources Issue #2 (Determining Incremental Capacity) <i>Slides 83-88</i>	Please identify preferred option and provide supporting rationale. OPTIONS: <ol style="list-style-type: none"> 1. $IC = QC - CC$ 2. $IC = QF * (NC - CC) = QF * MC$ QUESTION: Which Option provides a solution that is fair to both participants and ratepayers and ensures resource adequacy needs are met? <ul style="list-style-type: none"> - Are there any additional options that should be considered? - How would this change if the uprated MW were separately metered? 	The options need to be further discussed in stakeholder sessions and information sessions with contract counterparties. If the uprate is a distinct unit at the facility then the unit should be separately metered. Consideration should be given to the cost of separate revenue metering for low incremental capacity. Separate metering for a hydroelectric runner upgrade is not physically feasible and this requirement would be a barrier to optimize an existing resource.

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	(3d) Contracted Resources: Additional Questions for Discussion <i>Slide 90</i>	QUESTION: Are there any other items/issues that should be considered related to the participation of incremental capacity from contracted facilities?	The allocation of fixed costs for incremental capacity needs to be assessed within the different contract structures.
	(3e) Regulated Entities <i>Slides 91-92</i>	QUESTION: Are there any specific participation requirements or issues to be considered associated with the participation of Regulated Entities?	-----
	(3f) Imports <i>Slides 93-95</i>	QUESTION: Should the import of both new and existing resources be eligible? QUESTION: Are there specific fuel types that should not be eligible to provide imported capacity? <ul style="list-style-type: none"> - Coal is not permitted to be used to generate electricity in Ontario, should this restriction be extended to importing generators/jurisdictions? - Can imports backed by intermittent generation be counted on to meet system adequacy needs? QUESTION: Should system-backed imports be eligible? QUESTION: Should imports backed by a proponent's portfolio of resources be eligible? QUESTION: Are there any other considerations that should be considered in relation to the eligibility of	Imports from both new and existing resources should be eligible and imported resources should undergo similar obligations as resources in Ontario The restriction of a coal capacity import is a government policy decision. However, in accordance with the Cap and Trade program for Ontario, coal generation from external jurisdictions is permitted in the Ontario energy market with the provision that these resources have carbon allowance obligations based on the import jurisdiction. If this policy is also applied to capacity imports, coal generation should also be eligible to participate with similar obligations for carbon allowance obligations. The one difference should be that if the capacity is from a specific resource (as in the NYISO market), the carbon obligations should be calculated specific to that coal plant (not the average for the importing jurisdiction) and applied to the transaction. System-backed imports and imports backed by a proponent's portfolio of resources should be eligible or

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		imported resources for Ontario?	<p>an option but obligations would need to be defined. As an example, if the generator capacity is forced out, and the import is system backed, the pro-rata calculation for must offer obligations needs to be determined.</p> <p>External intermittent resources and pseudo-ties require further discussion.</p>
Qualified Capacity	(1) Planned / Maintenance Outages <i>Slides 109-114</i>	<p>Please identify preferred option and provide supporting rationale.</p> <p>OPTIONS:</p> <ol style="list-style-type: none"> 1. Include planned/maintenance outages implicitly as part of the “Intermittent and Energy Limited” resource’s historical production data 2. Exclude planned/maintenance outages implicitly as part of the “Intermittent and Energy Limited” resource’s historical production data <p>QUESTION: What other considerations should be taken into account for how planned & maintenance outages impact Qualified Capacity?</p>	Planned / maintenance outages should not impact Qualified Capacity as the majority of outages can be shifted away from peak periods and all require advance approval by the IESO.
	(2) Forced Outages <i>Slides 116-122</i>	<p>Please identify preferred option and provide supporting rationale.</p> <p>OPTIONS:</p> <ol style="list-style-type: none"> 1. Exclude OMC outages from EFORd calculation for “Thermal Resources” 2. Include OMC outages from EFORd calculation for “Thermal Resources” <p>QUESTION: What type of forced outages should be</p>	Including outside management control outages in the EFORd calculation due to <u>transmission / distribution disruptions</u> could unduly penalize specific existing resources. Further, forced outages and derates for intermittent and energy limited resources for transmission disruptions should be added back to historical production data if this data is used in the calculation of Qualified Capacity.

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		excluded, if any, when determining EFORD for Qualified Capacity?	
	(3) Seasonal Capability <i>Slides 124-130</i>	Please identify preferred option and provide supporting rationale. OPTIONS: <ol style="list-style-type: none"> 1. Annual test and/or historical production data for “Thermal Resources” 2. Seasonal test and/or historical production data for “Thermal Resources” QUESTION: What other considerations need to be taken into account related to Seasonal Capability when determining Qualified Capacity?	Testing should be seasonal and consistent with other IESO programs; such as, the IESO’s Seasonal / Unit Readiness Program.
	(4) Locational Constraints <i>Slides 132-135</i>	QUESTION: What other considerations should be taken into account with respect to Locational Constraints?	Considerations identified are reasonable.
	(5) New Resources <i>Slides 137-145</i>	Please identify preferred option and provide supporting rationale. OPTIONS: <ol style="list-style-type: none"> 1. Similar class average values (NERC GADS or CEA) 2. Obtain simulated data from a provider 3. Similar existing unit(s) in Ontario QUESTION: What other considerations should be taken into accounting when establishing the Qualified Capacity of a new resource?	OPG currently compiles NERC GADS data and / or submits data to the CEA for our facilities. Both types of data are suitable for use in determining qualified capacity. OPG believes the information and the format is similar between these 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. For new technologies this information may not be readily available and a theoretical approach from an independent source may be required until reliable data

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			can be generated.
	(6) Methodology (6a) Aggregation Level <i>Slides 148-149</i>	QUESTION: What other considerations for aggregation level should be taken into account when determining Qualified Capacity?	Water management plans and dependancies between different stations along a cascading river system and units within a station need to be considered for hydroelectric plants. Hydroelectric units that are connected to different voltages at a station or to different circuits at a station may require special consideration to manage reservoir and flow regulatory requirements.
	(6b) Calculation Method <i>Slides 150-156</i>	Please identify preferred option and provide supporting rationale to calculate Qualified Capacity for “Intermittent and Energy Limited” Resources. OPTIONS: <ol style="list-style-type: none"> 1. Capacity Contribution 2. Effective Load Carrying Capability (ELCC) QUESTION: What calculation method should the IESO adopt to qualify capacity from Thermal or Intermittent and Energy Limited resources?	Regardless of the option selected, the calculation should be seasonal and revised on a periodic basis to reflect any changes that may have occurred over the period. Further all supporting information needs to be open and transparent. It is expected that this calculation 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? 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 -

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			<p>additional analysis on the magnitude of the difference in the results from the two methods using specific examples would be helpful in this discussion.</p> <p>For energy limited resources, such as hydroelectric, the calculation may need to be separated into two categories: run of the river and peaking resources. For run of the river hydroelectric resources, a calculation using a seasonal capacity contribution is simple and reasonable. Peaking hydroelectric resources require further analysis and discussion.</p> <p>Qualified Capacity for thermal resources should be kept simple. Utilizing a seasonal calculation based on EFORD is reasonable.</p> <p>The calculation of Qualified Capacity should be consistently applied for each technology across all of the IESO’s planning and market analyses. The same methodology used for determining the Qualified Capacity for the ICA should be used for determining the Target Capacity for the ICA, the capacity for the assets that do not participate in the ICA but contribute to the Resource Adequacy target, the IESO’s planning and forecasting models, the 18 month outlook and any other policy / plan / program that requires capacity data.</p>

General Comments/Feedback:

The feedback presented in this template is based on a current understanding of the design elements being considered for a high level ICA design. When the ICA is integrated into the other Market Renewal Program workstreams, the views expressed for some of these elements may need to be discussed further and revised.