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

Stakeholder Meeting: November 6th, 2017

Feedback request by: 2017/12/04 **Date Submitted:** *YYYY/MM/DD*	**Feedback provided by:** Company Name: Whisker Labs Contact Name: Robert Kingr Phone: [redacted] Email: [redacted]

The IESO held the third meeting of the 'Options Phase' of the Market Renewal – Incremental Capacity Auction engagement on November 6th, 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)
- For the recommendations/next steps presented, indicate your agreement/ disagreement 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 / Next Steps / Recommendations	Stakeholder Feedback
Resource Performance Obligations **&** **Performance Assessment**	(1a) Must-offer Timeframe *Slides 38-41*	**RECOMMENDATION** - Participants will have a must-offer obligation in both the day-ahead market and real-time energy market	Fine
	(1b) Must-offer Amount *Slides 42-46*	Please identify preferred option and provide supporting rationale. **OPTION 1:**Rely only on future Qualified Capacity (UCAP) ratings to drive the desired behaviour (note: this incentive is inherent to the design of the Qualified Capacity process and will occur by default) **OPTION 2:** In addition to Option #1, also establish a "Pay-for-Availability" mechanism that considers the amount of capacity that was offered by the resource during the Commitment Period and reduce payments if it falls below their Capacity Obligation **QUESTION:** Should availability be assessed via a Pay-for-Availability mechanisms or are existing incentives in the energy market and updates to future Qualified Capacity ratings sufficient? • Consideration will also need to be given to whether or not both Pay-for-Availability and Pay-for-Performance mechanisms are required to define the desired capacity product	IF I understand the question, it is important that, at least for weather-sensitive load resources (WSLR), there be limited availability assessment hours and that a pay for performance approach be allowed. This allows an air-conditioning controls program to provide valuable load reductions at peak (or load consumption pre-peak if desirable), but not be penalized inappropriately for not being available off peak, which is unavoidable. A performance payment system can be used to appropriately adjust the payment to WSLRs relative to 24x365 resources, if they are called upon in off-peak periods. This de-rating of the resource is acceptable as long as it doesn't become a penalty that overwhelms the potential up-side for participation. (Example: ERCOT WSLR treatment in Emergency Response Service pays the average of performed reductions at at least 8 tests or event per season.) These comments apply whether the IESO adopts a seasonal or annual capacity market (with or without seasonal divisions).

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		Please identify preferred approach and provide supporting rationale. **Approach 1 -** Hourly Assessment: Ensure the MWs offered and/or generated are greater than or equal to the Capacity Obligation in each hour during which performance is assessed **Approach 2 -** Average Assessment: Ensure the MWs offered and/or generated are greater than or equal to the Capacity Obligation on average over the commitment period **QUESTION:** If the decision is made to have a Pay-for-Availability mechanism, what approach for implementing the mechanism should be adopted (i.e. assess "on average" or "in each hour")? Should the same approach be used for all resource types?	Using the average performance during a period is acceptable for WSLRs, although depending on the payment reduction structure associated with non-availability, or non-performance, an appropriate hourly assessment process also might be adopted.
		NEXT STEPS - Taking into account the stakeholder feedback and system operational needs, the IESO will work with Brattle to further explore the options associated with these features and provide a preliminary recommendation to stakeholders in a future meeting	
	(1c) Must-offer Hours *Slides 47-52*	**QUESTION:** Should availability be assessed via a Pay-for-Availability mechanisms or are existing incentives in the energy market and updates to future Qualified Capacity ratings sufficient? • Consideration will also need to be given to whether or not both Pay-for-Availability and Pay-for-Performance mechanisms are required to define the desired capacity product	

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		Please identify preferred option and provide supporting rationale. **OPTION 1:** Assess participants' availability 24hrs a day, and there will be non-performance implications for not meeting the obligation, which could be greater during pre-defined hours with elevated outage risk **OPTION 2:** Assess participants' availability only during pre-defined delivery period, and there will be non-performance implications **QUESTION:** If the decision is made to have a Pay-for-Availability mechanism, over what hours should the assessment take place?	Again, for WSLRs, particularly residential load resource aggregations, availability should ideally be measured against temperature, the primary weather factor (although not the only one) impacting demand. We could easily provide a bid curve based on temperature, and could be evaluated against that performance overall or average per-asset performance of an aggregation. A simplified way to address this would be to have a separate category for baseload and peaking resources. Availability Assessment Hours for peaking resources would be limited to high demand hours (which correlate highly with WSLR availability), as is done with the CAISO, Proxy Demand Response. ERCOT test events are called during high temperature days for weather sensitive loads.
		NEXT STEPS: Taking into account the stakeholder feedback and system operational needs, the IESO will work with Brattle to further explore the options associated with these features and provide a preliminary recommendation to stakeholders in a future meeting	
		RECOMMENDATION: Participants would have a must-offer obligation 24 hrs per day; potential for modifying obligations due to resource-specific constraints	One way to modify obligations would be to specify Availability Assessment Hours as discussed above, another to appropriately define capacity obligations for Use Limited Resources (also done in CAISO), or to allow different bid prices in different hours as an indirect means to manage resource obligations.

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	(1d) Outage Planning and Reporting *Slides 53-55*	**RECOMMENDATION:** Participants required to follow existing Outage Management processes, which per existing Market Rule and Market Manual obligations requires submission of planned, maintenance, and forced outage data	
		RECOMMENDATION: If Pay-for-Availability mechanism is adopted, the non-performance charges calculated should not be impacted by approved planned outages	
	(1e) Capacity Check Test *Slides 56-58*	**RECOMMENDATION:** IESO should be able to conduct Capacity Check Tests during the Commitment Period	Fine
	(2a) Response during Emergency Events *Slides 60-66*	**QUESTION:** Do stakeholders think that a Pay-for-Performance mechanism should be adopted as part of the ICA? • If so, under what circumstances should relief be granted for not generating during emergency events?	Assuming we mean the same thing by Pay-for-Performance, yes. What we discuss above, is a workable pay for performance approach (ERCOT). Requiring that all capacity resources be available during emergencies seems appropriate, generally. Most emergencies are likely to be driven by weather events where WSLR should be available. Some emergencies are not weather driven, however, so the ISO would need to have a mechanism for fairly derating WSLR (as discussed above), if an emergency call when such resources are already at or below their minimum demand.
		NEXT STEPS: Taking into account stakeholder feedback and system operational needs, the IESO will work with Brattle to further explore whether a Pay-for-Availability and/or a Pay-for-Performance mechanism is appropriate for Ontario and present a recommendation back to stakeholders at a future meeting	

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	(3a) Self-Scheduling vs. Dispatchable *Slides 67-70*	Please identify preferred option and provide supporting rationale. **OPTION 1:** Only allow Dispatchable resources to participate in the ICA **OPTION 2:** Allow Dispatchable and limited amount of Self-Scheduling resource to participate in the ICA **QUESTION:** If participants below a size threshold are allowed to register resources as Self-Scheduling, what considerations should be taken into account when setting the threshold?	
		RECOMMENDATION: Require participants to be dispatchable, with exemptions for some resources below a certain size threshold to participate as self-scheduling resources	
	(3b) Dispatch Dead-band *Slides 71-74*	**QUESTION:** What technology specific considerations should be taken into account when setting the dispatch dead-band?	Virtural HDR will have a very difficult time, for the foreseeable future in closely controlling its real-time contribution because resources such as residential WSLR simply can't justify real-time telemetry that would allow such control. This may change in the future, but in the near term, aggregators of these "Virtual Resources" in the ISO will tend to exceed the obligation to hedge uncertainty, and therefore, over-perform. This can be improved with time and monitoring, and the percentage variation is less significant as the size of the aggregation increases. It would be nice if the emerging aggregators could work with the IESO cooperatively to fine-tune forecasting.

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		Please identify preferred option and provide supporting rationale. **OPTION 1:** Absolute Quantity (MW) **OPTION 2:** Percent of dispatch instruction (%) **OPTION 3:** A combination of both (MW and %) **RECOMMENDATION:** Establish a consistent percentage dead-band for compliance with dispatch instruction for all resources, and remove absolute quantity (MW) thresholds	There should be more flexibilility for smaller resources, particularly if the % of resource is used.
		NEXT STEPS: Assess appropriate threshold for dead-band based on stakeholder and internal IESO consultations	
	(3c) Minimum Dispatch Duration *Slides 75-78*	**QUESTION:** What technology specific considerations should be taken into account establishing the minimum dispatch duration?	WSLR are limited-energy or limited-duration resources. They are similar to thermal energy storage resources, which have limited duration and require periodic recharge.
		NEXT STEPS: Conduct further analysis of system needs to set the minimum dispatch duration based on reliability studies, taking into consideration resource type and capability	We support requirements that both fit the characteristics of the resource and improve its value to the Operator. Therefore, we have supported changes to the dispatch requirements, through comments submitted to the the DRWG to allow dispactches of load resources, particularly WSLR, UP TO 4 hours, and at least 1 hour. PJM and ISO NE, both sited as examples by the IESO, have little or no WSLR participation because of their market design, despite the fact they purchase capacity to meet weather driven peaks.

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	(3d) Resource Operational Limitations *Slides 79-82*	**QUESTION:** What specific operational limitations should be considered for each type of resource?	WSLR, especially residential aggregations, have fewer limitations operationally that some large load resources. Through our comments over the last year to the DRWG we have supported changes to the operational limitations for DR that would allow the system operator to call DR with reduced standby notice, and Activation notice. We would also suggest allowing DR resoruces to be considered limited-use, in the sense of limiting the energy required per day, week and month (CAISO consideres a DR resource's obligation fulfilled if it is called more than 4 hours in a day, more than three days in a week or more than 24 hours in a month).
		NEXT STEPS: IESO to continue working with stakeholders to investigate options to reduce the unique resource operational limitations such that the ICA procures a consistent/uniform capacity product	

General Comments/Feedback:

Thank you for the opportunity to participate and provide feedback. The informational meetings and presentations are very helpful, and we appreciate the ISO's interest in learning about the unique character of emerging resources. It is very difficult, however, for most emerging technology companies to have the ressources to participate in all the Market Renewable working sessions and comment opportunities. We encourage the IESO to seek input on market design for demand response aggregators through the DRWG wherever possible.