

Incremental Capacity Auction – Phase 3 - Options

November 6, 2017

Minutes of Meeting

Date held: November 6 th , 2017	Time held: 9:00 am – 3:00 pm	Location held: Four Points by Sheraton Toronto Airport
Invited/Attended	Company Name	Attendance Status A)ttended; (WebEx) Attended via WebEx;
AMPCO	Anderson, Colin	A
AMPCO	Rhonda Wright	A
Bruce Power	Dalzell, Pat	A
EnerNOC, Inc.	Griffiths, Sarah	A
OEB	Brown, Dave	A
Goreway Power Station	Coulbeck, Rob	A
Goreway Power Station	Sutherland, Chris	A
H2O Power	Somerville, Stephen	A
Northland Power Inc.	Samant, Sushil	A
Ontario Power Generation	Wizniak, Lynn	A
Power Advisory LLC	Cumming, Alison	A
Power Consumer	Jagt, Mandy	A
APPrO	Butters, Dave	A
Storage Power Solutions	Oreskovic, Mike	A
The Brattle Group	Lueken, Roger	A
TransCanada Energy	Kuntz, Margaret	A
Great Circle Solar	Wharton, Karen	A
Mitsubishi	Masotti, Mark	A
IESO	Agavrioloai, Ioan	A
IESO	Agrawal, Vipul	A
IESO	Bedford, Julie	A
IESO	Chagla, Farid	TC
IESO	Palmer, Nathan	A
IESO	El-Samahy, Ismael	A
IESO	Hill, Warren	A
IESO	Kandola, Shanjeet	A
IESO	Trickey, Candace	A
IESO	King, Ryan	A
IESO	Ellard, Barbara	A
IESO	Maniyappan, Sunil	TC
IESO	Chapman, Tom	A
IESO	Nusbaum, Stephen	A
IESO	Zhao, Serena	A
Suncor	Hui, Ben	TC
CanWEA	Giannetta, Brandy	TC

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Resolute Forest Products	Degelman, Cara	TC
Suncor	Scott, Christopher	TC
HQEM	Belanger, Frederic	TC
Rodan	Goddard, Rick	TC
Whisker Labs	King, Robert	TC
Prepared by Nathan Palmer, please report any corrections, additions or deletions e-mail to scribe engagement@ieso.ca		

All meeting material is available on the IESO web site at: <http://www.ieso.ca/en/sector-participants/market-renewal/market-renewal-incremental-capacity-auction>

Introduction – Ryan King

The IESO welcomed participants to the third options meeting of the stakeholder engagement and thanked them for their participation. The IESO notified participants that previous action and issue items have been addressed and posted to ICA engagement webpage.

Review of Agenda and Meeting Objectives - Stephen Nusbaum

The IESO reviewed the agenda and noted that the intent of the session is to review stakeholder feedback and introduce the possible design options and preliminary recommendations for Resource Performance Obligations and Performance Assessment design elements.

Goals – Stephen Nusbaum

Based on the goal of the Incremental Capacity Auction project, the IESO recognized that certain large scale baseload assets or strategic resources for specific needs may be better suited to alternative or complementary mechanisms. The IESO also noted that a sub-committee has been formed to explore the challenges and opportunities for non-emitting resources participating in the future market. This committee will also consider potential barriers to participation and whether additional mechanisms to support these resources might be necessary to support future policy goals.

A participant asked when any new mechanisms or market designs would be developed to facilitate the participation from new baseload supply resources? (Slide 9)

The IESO responded that from the ICA development perspective this would be out of scope and reiterated that the focus of this engagement is to meet 'incremental' reliability needs. If, in the future, there is an

identified need for large-scale baseload assets then the IESO would need to consider all possible procurement options.

In a follow-up, a participant noted that if Pickering is assumed to be retired in the 2022-2024 timeframe then a gap of 3000 MW would exist in that period. This would represent a significant resource need. The participant added that they would need to understand how large, non-emitting resources could participate as soon as possible as they would need to start investing resources and development activities now in order to be ready.

On the question of non-emitting resources, the IESO noted that it has launched the Non-Emitting Resources (NER) sub-committee to help collect as much information as possible to understand the how these resource types can participate in a market context.

Stakeholder feedback-Net CONE (Change from Reference Technology to Basis for Reference Price)

A participant asked whether a carbon adder should be one of the potential parameters included in Net CONE and commented that it has been included in other jurisdictions. (Slide 16)

The IESO noted that in the current policy framework, the costs of carbon are reflected in the energy market through the Ontario cap and trade program. The process to establish Net CONE will have to take account of how programs such as cap and trade may impact expected total energy and ancillary service revenues.

A participant commented that without additional in-market or non-market mechanisms such as Renewable Energy Credits (RECs) or a forward capacity market for non-emitting resources as additional revenue streams, the ICA is going to select a gas fired generation unit to determine the CONE.

The IESO responded that it has clarified some of the terminology in the ICA (changing 'reference technology' to 'basis for reference price'). The purpose of this change was to remove any misperceptions that the price associated with the Net CONE will be any indication of the type of resource that will clear the auction. The IESO expects many resources to participate including DR, uprates, imports and new entrants as well as existing assets. The IESO added that it will hire a third party to work with them and stakeholders to establish the value of the Net CONE and that it will be reviewed based on identified triggers (such as material changes in market or policy conditions)

A participant asked whether the information from the sub-committee agenda and minutes will be posted to the IESO's website.

The IESO responded that all sub-committee meeting summaries and materials are posted on the [NER webpage](#). The sub-committee is open to all stakeholders but the expectation is that those on the committee commit to full, active participation in meetings and assigned tasks.

A participant sought to clarify that Net CONE includes all revenues and costs, so Net CONE is essentially net revenues and would capture cap and trade costs.

The IESO confirmed this is the case.

Performance Obligations and Assessments – Ismael El-Samahy

A participant commented that PJM's Pay-for-Performance policy was implemented following the polar vortex winter when several gas units did not have firm gas contracts or did not have gas during high demand peaks. The participant asked if this is something the IESO is worried about and what kind of behaviours the pay-for-performance requirements are trying to drive. (Slide 35-37)

The IESO responded that pay-for-performance is something the IESO wants to consider as an option. Current trends indicate that reliability events are driven by a number of factors and not just peak system needs. A pay-for-performance policy would provide an incentive for resources to respond to events outside of the peaks. The IESO may not want to tailor its obligations and assessments to predefined elevated risk periods as emergency events can occur at any time. This mechanism could help incentivize the types of resources and level of performance that is needed by the system. The obligations would need to be developed alongside assessment and incentive mechanisms.

Based on Brattle's review, it is true that in PJM a lot of the initial concern was regarding a lack of firm fuel. However when looking back to January 2014 only a quarter of the total outages were due to fuel supply and there were many other causes why units were unavailable such as a lack of preventative maintenance and frozen fuel piles. In Brattle's view, PJM's pay-for-performance policy was not designed to address firm fuel specifically but to address all types of reliability concerns. Since PJM has implemented this policy, they have seen more plants doing preventative maintenance or installing dual fuel or firm fuel as a response.

Availability Obligations & Assessments

A participant asked whether these obligations would also apply to contracted and rate regulated assets? (Slide 39)

The IESO responded that this is not something being considered; these obligations will only apply to resources procured through the ICA. Other resources would have their own contract or rate regulated obligations. All market participants are required to comply with market rules, both the existing rules and the future rules that will result from Market Renewal.

A participant asked what is the rationale for the must-offer requirement?

The IESO responded that the rationale is that it provides additional certainty that the resources will be available when needed and provides visibility of the available capacity to the control room operators. Must-offer obligations might also help mitigate market power that can result from resources that didn't clear in the day-ahead market withholding their capacity in the real-time energy market. The IESO also noted that the must-offer typically includes three layers: timeframe, amount and hours but that these obligations may not apply equally to all resources.

In regards to slide 45, a participant commented that if the pay-for-availability mechanism is selected, it would not work for hydroelectric resources because of regulatory requirements and the water management plans. The participant suggested that there are two approaches to accommodate hydroelectric and potentially other resources using a 24 hour average instead of hourly or average for the entire commitment period.

The IESO acknowledged that this feature must take into account the system needs, type of resources and their operating characteristics. The IESO is seeking feedback on these issues and will work with Brattle to further explore the options associated with these features.

Availability Obligations & Assessments (Slide 59)

A participant asked whether the IESO would apply one set of obligations to all resources and then consider exemptions and/or alternatives based on resource capabilities, or will each resource type have its own obligations and assessments?

The IESO responded that it expects it would require a minimum operational standard and then take into consideration the operational limitations of resource types and make accommodations where there is justification to do so.

Emergency Events Obligations & Assessments (Slide 60)

A participant commented that dispatchable loads have the opportunity to not bid and be treated as non-dispatchable in the real-time energy market. Under this scenario, if the IESO wanted to dispatch this load, there is no dispatch data to use (as bids have been pulled). How will this be respected under the ICA?

The IESO acknowledged that there is a need to consider the existing market rules framework and resource characteristics when developing resource performance obligations during emergency events.

A participant asked whether the pay-for-performance mechanism will take into account a resource's technical (operational) characteristics when assessing its compliance with the control room dispatch instructions. (Slide 61)

The IESO responded that in other jurisdictions, the pay-for-performance mechanism is very binary in its application. The expectation is that a generator should be online when it is needed including making preparations ahead of time so that it can respond to the types of emergency events the system is having. If resources are not on an approved outage or a force majeure, the pay-for-performance implications would take effect.

Visibility and Control Obligations

Regarding participation and competition in the ICA, a participant commented that the market participant size (1MW) should be re-evaluated as the telemetry and metering costs have come down significantly since the original threshold was developed. (Slide 67)

The IESO responded that lowering the threshold has broader implications for the energy market and these need to be understood and taken into account. The IESO indicated it would be interested in continuing discussions on the existing threshold as a potential future enhancement for the auction.

Feature 3(a) Self Scheduling vs Dispatchable –Options (Slide 68)

A participant commented on how compliance with dispatch instructions, even in the case of emergency, will be applicable to self-scheduling resources; i.e. would the IESO implicitly require all resources to be dispatchable to meet such obligations. The participant added that, according to the existing market rules, self-scheduling resources under 10 MW have an obligation to submit a schedule but in real time have no real obligation to follow it. They are only required to update their schedule within the pre-dispatch timeframe. How could this behaviour be compatible with a capacity position?

Brattle commented that typically, US jurisdictions allow self-schedulers, which would be exempted from some of the must offer requirements. However if they are capacity resources that self-schedule, they are still required to be available during emergency events or the subset of hours they are needed for reliability reasons. Additionally, in other ISOs, self-scheduling resources are subject to some but not all of the performance obligations and assessments. The IESO is looking for stakeholder input on these options and considerations to inform preliminary recommendations.

Feature 3(b) Dispatch Dead-band (Slide 71-74)

A participant commented that self-schedulers should also be held to this dispatch compliance dead-band. The participant further added that current dispatch tools might not be capable of consistently managing those dispatch dead-band requirements for dispatchable loads compared to generators.

The IESO's recommendation is to establish a consistent percentage dead-band for compliance with dispatch instruction for all resources and remove absolute quantity (MW) thresholds. The next step would be to assess an appropriate threshold for dead-band based on stakeholder and internal IESO consultations. The IESO acknowledged that having the correct tools to manage these situations is an important factor.

A participant asked if these dead-band rules only apply to the ICA-cleared participants or will all market participants be required to comply with these dead-bands and how will these be reflected in market rules?

The IESO clarified that if market rules and manuals changes are required, then these changes would clearly identify which resources need to comply with the dead-band requirements.

A participant further commented that the IESO needs to think about how to fairly apply different rules sets or exemptions for different types of resources who provide different value to the system.

Visibility & Control Obligations Feature 3(c) Minimum Dispatch Duration (Slide 75)

A participant suggested some of this content would be more appropriate to the SSM and DAM initiatives especially regarding minimum dispatch duration.

The IESO responded that the Market Renewal Program is a coordinated effort across the work streams. From an ICA perspective, setting minimum dispatch duration requirements helps ensure that cleared resources will be available and can be relied on during emergency events. For example, if LOLE modelling and/or a review of past emergency events over the last 10 years has shown that on average these types of emergency events last three hours, then the resources procured need to be capable of fulfilling these minimum requirements in order to be relied on for system adequacy.

Flexibility (84-90)

A participant asked the IESO to explain how scarcity pricing works in another jurisdiction; is it over and above the energy price cap?

Brattle explained that in ERCOT an administrative price adder is applied on top of the price set by the marginal resource that is still subject to an offer cap. This administrative price adder gradually increases as reserves decrease near the point of shedding load. The price of value of lost load has been administratively set at \$9,000/MWh. The administrative adder increases the price seen by generators and loads, such that they have a stronger incentive to respond and either increase their generation output or reduce their demand.

A participant asked how these jurisdictions determine when to apply these scarcity price rules, as often operating reserve activations are not indications of system adequacy issues. What types of resources is the IESO trying to incentivize?

Brattle clarified that this approach is not being proposed now; the auction is the mechanism being contemplated to address system adequacy issues. Brattle explained that where scarcity pricing is used the application of scarcity pricing is determined by how much operating reserves have been depleted. In all jurisdictions the mechanisms used need to be part of an integrated design to incentivize the right resources in terms of how they operate and participate in the auction.

A participant commented that flexibility needs should be in the SSM work stream as the focus seems to be about how to get certain resources in the dispatch to ensure the right behaviours in the market.

The IESO acknowledged this feedback and agreed that this sort of mechanism would not be something that would be implemented through the Capacity work stream of Market Renewal. The IESO reiterated that the intent of discussing flexibility in this session was only to highlight that there are a number of options available to address emerging flexibility needs, that the ICA may not be the best mechanism to address those issues, and that the Operability work stream will need to further explore what Ontario's needs are and how those needs can most efficiently be addressed.

The IESO thanked participants and requested feedback be sent to: engagement@ieso.ca. In particular, the IESO emphasised its interest in feedback on the questions posed in blue throughout the presentation.

The next ICA meeting is scheduled for December 4th, 2017.