

Market Renewal – Energy Work Stream

September 20, 2018 Meeting: Response to Stakeholder Feedback

Following the September 20, 2018 Market Renewal - Energy Work Stream stakeholder meeting, the IESO invited stakeholders to provide comments and feedback on a wide range of design options and preliminary decisions associated with the Energy Work Stream.

The IESO received feedback from:
AMPCO
Ontario Power Generation
Market Surveillance Panel

This feedback has been posted on the IESO stakeholder webpage for these engagements.

Note on Feedback Summary

The IESO appreciates the feedback received from stakeholders. This stakeholder feedback, along with the comments provided at the stakeholder engagement sessions, is important to the collaborative approach the IESO has committed to under the Market Renewal Program and will help inform the design decisions. All feedback received has been noted and will be considered as the engagement moves toward making preliminary decisions. Stakeholders will have additional opportunities to provide feedback on these elements throughout the high level and detailed design phases of the engagement. Below, the IESO has provided a summary table which outlines responses in respect of specific feedback or questions for which an IESO response was required at this time.

Stakeholder comments and IESO responses

Design Element	Stakeholder	Feedback	IESO Response
SSM - Pricing for Loads	AMPCO	<p>AMPCO does not support the IESO's preliminary recommendation for zonal pricing (with a nodal option) for non-dispatchable loads and nodal pricing for dispatchable loads for the following reasons:</p> <ul style="list-style-type: none"> • In terms of long-run efficiency, there are several other factors that influence industrial investment decisions and for this reason long-run efficiency should be given almost no weighting • For AMPCO members, the slight reduction in price that would be realized through uniform pricing is more tangible than the theoretical improvement in the short run efficiency • There is increased risk associated with LMP due to the lower levels of inertia that exist in a small zone vs the entire province, meaning the effects of volatility are felt more under LMP vs uniform pricing, and there is no corresponding return to mitigate this risk. <p>Accordingly, AMPCO supports a uniform pricing regime for loads in the province.</p>	<p>The move to a single schedule market will decrease costs to all Ontario consumers compared with the current two-schedule system.</p> <p>The IESO has proposed a nodal/zonal load pricing design for market participant loads in order to promote efficiencies and system cost savings not available through a market with a uniform price.</p> <p>Efficiency, however, has not been the IESO's sole consideration during the high level design process for load pricing. The IESO recognizes that, in addition to promoting efficient outcomes, the market design needs to be feasible and practical for Ontario consumers. This recognition is evident in the IESO's decision regarding the distribution of the congestion rents and loss residuals (the residuals) that result from locational pricing in an SSM.</p> <p>The disbursement methodology will allocate residuals to zones and loads that paid average quarterly prices that were higher than they would have been has</p>

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			<p>they paid a province -wide price.</p> <p>The allocation decision provides market participant loads with a measure of price protection against unforeseen congestion events, while still encouraging the efficiency benefits of zonal pricing. Loads in lower price zones benefit as they will not be asked to pay a higher province-wide average price.</p>
SSM – Congestion Rents and Loss Residuals	AMPCO	Notwithstanding that AMPCO does not support LMP for loads, it maintains that if this approach was adopted the frequency of residual disbursement should be as often as possible, since consumers need to know their costs immediately, for operational and reporting reasons.	The IESO will work with market participants in detailed design to establish a practical solution regarding how frequently the residuals are disbursed given a quarterly calculation period.
SSM – Intertie Congestion Pricing	Ontario Power Generation	While OPG supports option 3's approach for pricing during export congestion, OPG does not support the asymmetrical treatment of pricing when an intertie is import congested. OPG does not agree with the rationale that interties should be settled consistently with internal constrained resources considering interties are not 5-minute dispatchable.	<p>The choice of using a dynamic ICP at import congested interties is intended to encourage import offers that reflect the expected marginal value of each transaction. The current ICP approach does not accomplish this.</p> <p>The real-time import offer guarantee (RT-IOG) will continue to be available to eligible imports.</p>
SSM – Intertie Congestion	Ontario Power	Regarding the IESO's concern that the status quo for ICP (when import congested) could result in	Thank you for your feedback.

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Pricing	Generation	increased costs because of interactions between the DAM and RT where 'loads may end up guaranteeing the same import MW twice', OPG believes this issue could be easily addressed through coding that would prevent the applicability of a RT-IOG on any MW less than or equal to a DAM scheduled MW quantity.	
SSM – Congestion Rents and Loss Residuals	Market Surveillance Panel	<p>The MSP believes that a volumetric distribution of residuals would be the least distorting method of distribution vs the IESO's proposed relative zonal distribution for the following reasons:</p> <ul style="list-style-type: none"> • The efficiency losses associated with price changes of \$1-\$2 may be an acceptable trade-off for protecting loads from the uncertainty of zonal pricing so long as larger differences, currently north-south differences, are preserved as these are most likely to produce a long-run response by loads. • Peak hourly prices in high-price zones might be significantly reduced for some loads under relative zonal distribution, while volumetric distribution should leave substantial peaks in place and it is these peaks that are most likely to induce desirable short-run behavioural responses by some loads. 	<p>The IESO agrees with the MSP's assessment that a volumetric distribution would be a less distortionary method of allocating residuals than the proposed relative zonal distribution.</p> <p>When determining the methodology for disbursing the residuals IESO weighed the trade-off between efficiency and practicality of the solution. The relative zonal distribution was chosen as it is an acceptably efficient method and provides a better measure of protection for consumers against unforeseen congestion risk than a volumetric distribution.</p>
SSM – Congestion	Market Surveillance	The MSP supports a quarterly calculation of residuals rather than a monthly calculation	Thank you for your feedback.

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Rents and Loss Residuals	Panel	because this reduces price distortion.	
SSM – Load Pricing	Market Surveillance Panel	<p>The MSP supports the IESO’s preliminary decision of zonal pricing for loads as this supports efficient pricing and provided the following rationale:</p> <ul style="list-style-type: none"> • Zonal pricing supports important long-run price signals and presents an opportunity to encourage responses that are beneficial for the load and the Province. • Zonal pricing supports important short-run price signals as some loads will be able to respond to short-run price events such as transmission outages causing substantial short-run price excursions. Zonal pricing will increase the ability and desire of loads to respond to such events, and of other service providers to respond to such events, in ways that will be profitable for them and will reduce the severity of the price event. 	Thank you for your feedback.
SSM – Congestion Rents and Loss Residual	Hydro Quebec	<p>What will occur to the congestion rents when there is intertie congestion? Will exporters be allocated a share of any intertie congestion rent disbursement?</p> <p>Would it be treated as transmission rights residuals and this subject would be cover in an</p>	The topic of how to treat the real-time intertie congestion rents will be discussed within the upcoming stakeholder engagement on the Transmission Rights Clearing Account (TRCA) and TRs in general. The decisions from that engagement will feed into the detailed

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		upcoming stakeholder engagement?	design phase of MRP.
DAM – Global vs Zonal IESO Load Forecasts	Ontario Power Generation	OPG supports the IESO’s preliminary decision to move to zonal forecasting for non-dispatchable load (NDL) and manage forecast accuracy on a zonal basis to increase price convergence and the efficiency of the day-ahead unit commitment. On this matter, OPG assumes the IESO will revise its public reports to reflect load forecasts zonally. OPG would appreciate confirmation if this will be the case.	The IESO intends to revise its public reports to reflect load forecasts zonally.
DAM – Optimization of Energy Limited Resources	Ontario Power Generation	OPG appreciates the IESO’s collaborative approach to understand and capture the operating characteristics that would need to be respected in the new DAM engine for optimized scheduling. In addition to the list presented, OPG asks the IESO to consider one additional factor in scheduling hydroelectric resources: Schedule hydroelectric resources based on Facility Daily Energy Limit (DEL) instead of Resource DEL. Since DEL is offered at the resource level, scheduling with facility DEL (the sum of all resource DELs within the facility) serves to accurately reflect water available in the forebay that may not be utilized if one or more resources within a facility are unavailable. This also provides the IESO additional flexibility in scheduling.	<p>The IESO will consider whether multiple daily energy limits can be modelled at the facility level rather than the resource level during detailed design.</p> <p>The IESO will proceed with modelling multiple daily energy limits at the facility level if the capability to do so does not prevent the DAM from executing within 3 ½ hours and does not come at a significant implementation cost such that other higher priority software improvements could be placed at risk.</p>
DAM – Make-	Ontario	OPG found the guidelines presented for make-	The IESO intends to bring forward

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Whole Payment Guidelines	Power Generation	whole payments are logical and incent proper market behavior, but commented that it would be both helpful and important during the detailed design stage to identify and flush out additional examples than those provided in the presentation.	additional examples for make-whole payments calculations during detailed design.
DAM – Make Whole Payments - Treatment of Non-Quick Start (NQS) Ramp in DAM	Ontario Power Generation	OPG understands the IESO’s rationale for the preliminary decision to include ramping energy in a NQS resource’s financially binding DAM schedule although this will provide additional risk for generators. This risk should be considered in the discussion for reference pricing in Market Power Mitigation.	The IESO will consider any price or non-price parameters associated with ramping energy in the discussion for reference levels in market power mitigation. Costs associated with the ramping energy should be captured in the reference level for start-costs, rather than in the reference level for incremental energy.
ERUC – Look-Ahead Period	Ontario Power Generation	The IESO’s response to OPG’s request for delaying the preliminary decision for LAP timing did not address why the initial ERUC run could not be earlier. While the 20:00 run (per IESO presentation) is sufficient for reliability, OPG believes the earlier the ERUC engine can be run, the greater the opportunity for resources (ie. Hydroelectric) to react to updated changes in conditions (e.g. revised demand, variable generation forecast changes, SBG).	<p>The results of the PD optimization should be based on the same information as the DAM optimization to the extent possible, supporting the DAM financially binding schedule. Ideally, the first PD run considering hours of the next day would be at 23:00, considering only HE1-24, thereby optimizing the same 24 hours as DAM. However, for <u>reliability reasons</u>, it is necessary to run the initial PD a few hours earlier to assess needs during morning ramp hours, due the long lead time of cold NQS generators.</p> <p>In theory, if there are no changes in</p>

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			<p>inputs between DAM and the initial PD, the results should be exactly the same. The co-ordination with DAM will be impacted somewhat due to the 27 hour LAP, which is acceptable to ensure reliability.</p>
ERUC – Look-Ahead Period	Ontario Power Generation	<p>OPG believes a 20:00 initial ERUC run does not provide opportunity for gas suppliers (unless they have a fuel contract) to procure additional gas that may be required for the next day between HE1-HE15 should the ERUC results identify the need. An 18:00 initial run would provide suppliers a minimum amount of time required to meet the North American Energy Standards Board (NAESB) ID3 deadline at 19:00 to procure any gas between 22:00 today and 9:00 tomorrow.</p>	<p>The IESO expects that gas procurement decisions will be based on DAM financially binding schedules. After the DAM clears, gas will be procured intra-day in response to intra-day changes. It is unlikely that a PD run at 18:00 would result in additional commitments except in extremely rare circumstances, which would be addressed through reliability commitments.</p>
ERUC – Look-Ahead Period	Ontario Power Generation	<p>OPG believes an earlier ERUC run supports one of the key objectives of Market Renewal for transparency by facilitating a transparent unit commitment process and reducing the usage of manual commitments that may be identified during the period between the DAM and first ERUC run.</p>	<p>On rare occasions, the IESO must be allowed to issue reliability commitments prior to 20:00, but these rare events do not warrant ongoing additional PD advisory schedules for next day hours before 20:00. The IESO will continue working with stakeholders in Detailed Design to assess reliability commitment guidelines to manage significant system condition changes between the time DAM clears and 20:00.</p>

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ERUC – Intertie Transactions	Ontario Power Generation	<p>OPG agrees with the IESO’s concerns that including all non-DAM transactions in all ERUC runs could result in commitments supporting transactions that may not materialize; however, OPG suggests that the IESO consider the designs of neighboring markets on this issue which provide marketers a short opportunity to react to market signals. NYISO’s pre-dispatch engine includes non-DAM intertie transactions 150 minutes prior to RT with a 75 minute closed window which allows marketers 75 minutes to react to market signals. OPG suggests the IESO consider expanding the current preliminary decision of only including non-DAM transactions in the T+1 and T+2 (closed) window to include the T+3 hour. This would allow for greater price transparency for marketers to respond to, and result in a more efficient market as a result. By extending this decision by only one hour to the T+3 window, OPG believes this window is sufficiently short that there will be minimal impact from transactions being scheduled that do not ultimately materialize.</p>	<p>The IESO will uphold the current decision to efficiently meet Ontario reliability needs. In the hours before RT, the IESO requires accurate import and NQS commitment schedules to meet scheduled exports and demand. The IESO expects that DAM schedules will provide appropriate incentives for DAM intertie transactions to flow in RT based on system conditions.</p> <p>In other jurisdictions, intraday engines only need to look ahead a few hours to meet quick start resource commitment requirements. For NYISO, the Real-Time Commitment (RTC) engine optimizes over a 2.5 hour period and commits resources that can ramp in 10 or 30 minutes. Given these parameters, few additional limits are required for non-binding intertie transactions.</p> <p>For the IESO, non-binding intertie transactions could impact NQS commitments that are optimized over the entire look-ahead period. Outside the 120-minute mandatory window, non-DAM intertie bids & offers in PD hour T+3 would have no obligation to</p>

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			<p>materialize in RT.</p> <p>To avoid inefficiencies or reliability problems, non-binding transactions would require complex bid & offer change restrictions or failure penalties that would limit trader participation interest. For these reasons, the IESO does not propose any decision changes.</p>
General	Ontario Power Generation	As Market Renewal transitions into the detailed design stage, OPG would appreciate understanding at what point in the timelines the IT (vendor) decision is planned to be made.	The IESO intends to have the vendor chosen by the end of 2019.

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