

Market Renewal Single Schedule Market (SSM)

Meeting 8: Response to Stakeholder Feedback

Following the December 11th Single Schedule Market stakeholder meeting, the IESO invited stakeholders to provide comments and feedback on a series of design options related to price formation.

The IESO received feedback from:

Association of Power Producers of Ontario (APPrO)

Brookfield Renewable

Hydro Quebec Energy Marketing

MAG Energy Solutions

Nalcor Energy Marketing

Ontario Power Generation (OPG)

TransAlta

This feedback has been posted on the IESO stakeholder webpage for this engagement.

The Intertie Congestion Pricing Proposal

At the December 11, 2017 SSM stakeholder meeting, the IESO provided a proposal for the Intertie Congestion Price (ICP) design element. The proposal suggested changing the current intertie pricing methodology in order to provide the most efficient market outcome and therefore minimize the cost of meeting Ontario load. Presently, the IESO calculates a 'static' ICP in pre-dispatch and then adds or subtracts that ICP from the price paid or received by intertie traders in real-time. The pre-dispatch intertie prices are used for scheduling resources and setting the ICP, however, traders are settled based on the real-time price. This means that the current system allows exporters to pay lower prices and importers to be paid higher prices than the pre-dispatch prices at which they were scheduled. To the extent that exporters are able to predict price decreases (and importers price increases) between pre-dispatch

and real-time the current system encourages bids or offers that may target scheduling outcomes, in pursuit of better real-time prices, instead of expected marginal benefits/costs. When bids/offers are not reflective of marginal benefits/costs market efficiency is reduced and costs to Ontario consumers may increase. For example, an exporter may bid \$30 in pre-dispatch with the expectation that it will actually only have to pay \$15 in real-time. In pre-dispatch, resources will be scheduled to accommodate the \$30 export. However, if the export's willingness to pay was actually only \$15, then the resources scheduled to supply it could be inefficiently committed, which could result in increased costs to Ontario consumers.

The new proposal would better encourage efficient bids/offers from exporters and importers by keeping intertie settlement prices in-line with the pre-dispatch prices at which the intertie was scheduled. For example, if the intertie was export congested exporters would pay the higher of the intertie price in real-time or pre-dispatch. When import congested, importers would be paid at the lower of the intertie price in pre-dispatch or real-time. If the intertie is not congested, intertie transactions would be settled at the real-time price; which is consistent with the status quo. Better alignment between the prices paid by an export and its bid price - its stated willingness to pay - will encourage the export to bid in-line with its expected marginal benefits; the same is true for imports. Bids reflecting marginal benefits (or offers reflecting marginal costs) will ensure efficient scheduling of resources to meet export demand (or import supply) minimizing the cost of meeting Ontario load.

Subsequent to the December 2017 SSM stakeholder meeting, the IESO received feedback from stakeholders regarding the intertie congestion pricing proposal. Among the questions and comments was a commonly expressed concern that stakeholders did not have a clear understanding of how the proposal would interact with pending decisions regarding the day-ahead market and financial transmission rights for intertie transactions. The IESO appreciates this concern about the integrated nature of the various initiatives under the Energy workstream. To help advance the conversation, the IESO can offer the following description of how jurisdictions with a day-ahead market settle financial transmission rights and provide opportunities for intertie transactions to mitigate congestion and price risks.

In jurisdictions with a day-ahead market, participants are able to protect against real-time pricing and congestion risk by entering into financially binding positions day-ahead. Participants who follow their day-ahead schedule in real-time are settled at the day-ahead price and are not exposed to pricing changes in real-time. Those jurisdictions also offer financial transmission rights that can

protect against day-ahead intertie congestion risk. Those transmission rights settle based on day-ahead prices. Furthermore, those jurisdictions do not provide financial transmission rights for intertie congestion in real-time.

In addition, the IESO intends to undertake a review of its transmission rights market later in 2018 after the finalization of the SSM and DAM high-level designs. Among the topics that the review will assess is whether the transmission rights should be settled in day-ahead or real-time.

Note on Feedback Summary

The IESO appreciates the feedback received from stakeholders outlining their preferred approach or recommendation on different aspects of the SSM design. These have been noted and will be considered as the engagement moves toward making preliminary decisions. The IESO has provided a summary table below, which outlines 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
Intertie Congestion Pricing	Brookfield Renewable	<p>The proposal to settle with the "higher of pre-dispatch or real-time pricing" completely undermines FTR's current utility as a hedging product. At the moment, the IESO's Transmission Rights payout typically equals the ICP calculated in pre-dispatch. This allows marketers to hedge an intertie transaction's congestion risk with relative accuracy. With the IESO's proposal, the correlation between FTRs and ICPs would not only become mismatched, but also difficult to hedge ex-ante. This associated increase in uncertainty would simply incent marketers to increase import pricing or reduce offer volume. This result is contrary to the IESO objective to: Incent the submission of intertie bids/offers that reflect expected costs, so as to minimize the cost of meeting Ontario load.</p>	<p>In jurisdictions with a day-ahead market, participants are able to protect against real-time pricing and congestion risk by entering into financially binding positions day-ahead. Participants who follow their day-ahead schedule in real-time are settled at the day-ahead price and are not exposed to real-time congestion or prices. Such jurisdictions also offer financial transmission rights that can protect against day-ahead intertie congestion risk. Those transmission rights settle based on day-ahead prices; jurisdictions with day-ahead markets do not provide financial transmission rights for intertie congestion in real-time.</p> <p>In addition, the IESO intends to undertake a review of its transmission rights market later in 2018 after the finalization of the SSM and DAM high-level designs. Among the topics that the review will assess is in which timeframe - day-ahead or real-time - should the IESO's transmission rights be settled?</p>

Design Element	Stakeholder	Feedback	IESO Response
Intertie Congestion Pricing	Brookfield Renewable	<p>Internal generators settle at 5-min intervals, and can quickly modify its offers in response to market conditions. Intertie transactions however, are currently locked-in for 1-hour once scheduled. Even if the IESO were to establish intertie trades with 15-min intervals, the difference in maneuverability is still significant. The IESO's proposal actually discourages importers from scheduling trades closer to its opportunity costs, because: a) hedging would be difficult, and b) the marketer stands to receive the lesser of the pre-dispatch and real-time price. In this scenario, importers would be unduly discriminated against compared to internal generators, and would respond by decreasing import volume in pre-dispatch. In essence, importers should not be penalized for responding to pre-dispatch signals published and calculated by the IESO.</p>	<p>The IESO would like to get more information as to the linkages between hourly scheduling of intertie transactions and method #1 vs. method #2 for pricing congested interties in real-time.</p> <p>a) Regarding the difficulty of hedging, please refer to the above response regarding day-ahead markets.</p> <p>b) Under method #2, imports will be settled on the lesser of the pre-dispatch or the real-time price. This would price import transactions in a manner consistent with their incremental value and encourage offers in line with expected marginal costs.</p> <p>In addition, the proposed methodology does not always result in lower prices for importers; method #1 can also result in lower prices for importers than method #2. Such an example was described in scenario C from the December 2017 SSM stakeholder engagement meeting (slide 65). When an intertie is import congested in pre-dispatch and prices decrease between pre-dispatch and real-time, method #1 will subtract a static ICP from the real-time price, driving a further price decrease. Under method #2, this additional price decrease does not occur unless the price in Ontario nearest to the intertie falls below the pre-dispatch intertie price.</p> <p>The IESO will consider whether a real-time import offer guarantee (RT-IOG) for import transactions under method</p>

Design Element	Stakeholder	Feedback	IESO Response
			#2 is needed - New York does not currently provide a RT-IOG.
Intertie Congestion Pricing	APPrO	The Preliminary Decision commentary on slide 55 and Slide 69 are not consistent with RTD method 2 being \$60	The IESO has reviewed the scenarios provided in the December materials and will provide further clarity to show how the results are consistent with method#2.
Intertie Congestion Pricing	APPrO	<p>We are not convinced that the following comment quoted from the presentation would incent efficient market behaviour by intertie traders or long-term futures traders - "Method #2 will lead to intertie bids/offers that reflect the actual value of the import/export at the intertie vs. bids/offer that may target scheduling outcomes (knowing that the settlement price is likely to be different between pre-dispatch and real-time)".</p> <p>We feel that there has not been a very</p>	Presently, the IESO calculates a 'static' Intertie Congestion Price (ICP) in pre-dispatch and then adds or subtracts that ICP from the price paid or received by intertie traders in real-time. The pre-dispatch intertie prices are used for scheduling resources and setting the ICP, however, traders are settled based on the real-time price. This means that the current system allows exporters to pay lower prices and importers to be paid higher prices than the pre-dispatch prices at which they were scheduled. To the extent that exporters are able to predict price decreases (and importers price increases) between pre-dispatch and real-time the current system encourages bids or offers that may target scheduling outcomes, in pursuit of better real-time prices,

Design Element	Stakeholder	Feedback	IESO Response
		<p>compelling case provided by the IESO and FTI as to why method 2 is preferable to method 1 in developing and incentivizing desirable behaviour by power marketers in the real time physical markets or how this pricing may impact behaviour in the longer term derivatives market that would be crucial in supporting a capacity auction design. It is also unclear how TR's might be impacted by this intertie pricing change or what the overall system financial impact might be if the potential financial benefits of importing and exporting power to and from Ontario are changed. APPrO recommends that the IESO give consideration to stakeholder feedback around the issue and provide more evidence to support the case one way or the other before a preliminary decision is made.</p>	<p>instead of expected marginal benefits/costs. When bids/offers are not reflective of marginal benefits/costs market efficiency is reduced and costs to Ontario consumers may increase. For example, an exporter may bid \$30 in pre-dispatch with the expectation that it will actually only have to pay \$15 in real-time. In pre-dispatch, resources will be scheduled to accommodate the \$30 export. However, if the export's willingness to pay was actually only \$15, then the resources scheduled to supply it could be inefficiently committed, which could result in increased costs to Ontario consumers.</p> <p>The new proposal would better encourage efficient bids/offers from exporters and importers by keeping intertie settlement prices in-line with the pre-dispatch prices at which the intertie was scheduled. For example, if the intertie was export congested exporters would pay the higher of the intertie price in real-time or pre-dispatch. When import congested, importers would be paid at the lower of the intertie price in pre-dispatch or real-time. If the intertie is not congested, intertie transactions would be settled at the real-time price; which is consistent with the status quo. Better alignment between the prices paid by an export and its bid price - its stated willingness to pay - will encourage the export to bid in-line with its expected marginal benefits; the same is true for imports. Bids reflecting marginal benefits (or offers reflecting marginal costs) will ensure efficient scheduling of resources to meet export demand (or import supply) minimizing the cost of meeting Ontario load.</p>

Design Element	Stakeholder	Feedback	IESO Response
			<p data-bbox="1155 321 1948 581">Intertie transactions are still able to see price improvements between pre-dispatch and real-time when the intertie is not congested; the intertie pricing rules proposed would only apply when there is congestion on the intertie. When interties are scheduled to full capacity, and therefore congested, there is no efficiency loss from unscheduled transactions.</p> <p data-bbox="1155 636 1948 1058">In jurisdictions with a day-ahead market, participants are able to protect against real-time pricing and congestion risk by entering into financially binding positions day-ahead. Participants who follow their day-ahead schedule in real-time are settled at the day-ahead price and are not exposed to real-time congestion or prices. Such jurisdictions also offer financial transmission rights that can protect against day-ahead intertie congestion risk. Those transmission rights settle based on day-ahead prices; jurisdictions with day-ahead markets do not provide financial transmission rights for intertie congestion in real-time.</p> <p data-bbox="1155 1107 1948 1295">The IESO intends to undertake a review of its transmission rights market later in 2018 after the finalization of the SSM and DAM high-level designs. Among the topics that the review will assess is in which timeframe - day-ahead or real-time - should the IESO's transmission rights be settled?</p>

Design Element	Stakeholder	Feedback	IESO Response
Intertie Congestion Pricing	Hydro Quebec	<p>How will the congestion be treated in real-time? On slide 69, with the proposed method, we end up with a price of \$60. The proposed method states that a company who buys electricity from Ontario will need to pay the higher price between the ERUC and the real-time.</p> <p>In this example, the way it is presented, it looks like:</p> <p>ERUC : \$20 + Congestion ERUC \$40 = \$60 RT : \$30 = \$30 (it doesn't seem to include a congestion component)</p> <p>Max between ERUC and real-time : \$60</p> <p>Is it how this should be calculated, or is there something missing, like a congestion component in real-time?</p>	<p>Using the scenario on slide 69 from the December 2017 SSM stakeholder engagement materials, the IESO has provided a more detailed description of how the congestion and settlement values would be determined. Note that ERUC has been replaced with PD for this description:</p> <p><u>Method #1</u></p> <p>PD Price = \$60 = \$20 PD Niagara Intertie Bus + \$40 PD ICP RT Price = \$70 = \$30 RT Niagara Intertie Bus + \$40 PD ICP</p> <ul style="list-style-type: none"> • Method #1 keeps the ICP static between RT and PD (pre-dispatch) regardless of whether or not the intertie is congested in real-time • This is not consistent with how congestion pricing is applied to internal resources <p><u>Method #2</u></p> <p>PD Price = \$60 = \$20 PD Niagara Intertie Bus + \$40 PD ICP RT Price = \$60 = \$30 RT Niagara Intertie Bus + \$30 RT ICP</p> <ul style="list-style-type: none"> • Method #2 settlement price (when the intertie is congested) is the higher of the PD or real-time price at the NYISO proxy bus. It does not use a static ICP and instead allows for a dynamic congestion component between PD and RT. In this example, the congestion cost at the intertie decreased from \$40 to \$30 between PD and RT • This is consistent with how congestion pricing is applied to internal resources • In this scenario exporters pay a lower price under method #2 than method #1

Design Element	Stakeholder	Feedback	IESO Response
Intertie Congestion Pricing	Hydro Quebec	On Slide 57, on method #2 first bullet, there's a concept of a dynamic intertie congestion. Kindly provide more information on this concept, how would it apply in the hour between the ERUC and the real-time	<p>A dynamic congestion component is one that is able to change between pre-dispatch and real-time, depending on the locational price within Ontario nearest to the intertie proxy bus.</p> <p>Using the example on slide 69, the pre-dispatch intertie congestion price (ICP) was \$40/MWh. Under method #1 the ICP is held static at the pre-dispatch value and is added to the real-time price at the Niagara bus within Ontario, which sets the real-time price at the NYISO intertie proxy bus. Thus the price exporters would pay is $\\$30 + \\$40 = \\$70$.</p> <p>Under method #2 the ICP would not be held static. It is calculated after-the-fact as the difference between the intertie settlement price determined under method #2 and the price at the location (Niagara) closest to the intertie. A price movement from \$20 in pre-dispatch to \$30 in real-time at the Niagara location near the intertie will not affect the settlement price for the exporter under method #2; they will pay the pre-dispatch price of \$60, which is less than the \$70 they would pay under method #1. The ICP, however, will decrease from \$40 in pre-dispatch to \$30 in real-time. Thus we can say that under method #2, the ICP is dynamic between PD and RT.</p>
Intertie Congestion Pricing	Hydro Quebec	What will happen with the Shadow pricing with the new model?	Intertie schedules will continue to be based on the IESO's constrained dispatch and, similarly to supplier pricing, real-time settlement will be based on the shadow/nodal price at specific locations - not a uniform price.

Design Element	Stakeholder	Feedback	IESO Response
Intertie Congestion Pricing	MAG Energy Solutions	<p>Under method 2, a fully scheduled line on export would have a minimum price and a fully scheduled line on import would have a maximum price.</p> <p>We don't see this as being an efficient way to deal with intertie transactions because MAG Energy thinks that method 2 will send wrong price signals and there will be discrimination between two supply options. Method 2 would reduce the incentive for a market participant (importer or exporter) to schedule transactions if the exporters forecast that the real-time IESO price will be lower than the forecasted interface price. It would diminish market efficiency and would reduce the positive effect of interchange scheduling.</p>	<p>Method #2 would better encourage efficient bids/offers from exporters and importers by keeping intertie settlement prices in-line with the pre-dispatch prices at which the intertie was scheduled. For example, if the intertie was export congested exporters would pay the higher of the intertie price in real-time or pre-dispatch. When import congested, importers would be paid at the lower of the intertie price in pre-dispatch or real-time. If the intertie is not congested, intertie transactions would be settled at the real-time price; which is consistent with the status quo. Better alignment between the prices paid by an export and its bid price - its stated willingness to pay - will encourage the export to bid in-line with its expected marginal benefits; the same is true for imports. Bids reflecting marginal benefits (or offers reflecting marginal costs) will ensure efficient scheduling of resources to meet export demand (or import supply) minimizing the cost of meeting Ontario load.</p> <p>If there is a consistent bias between pre-dispatch to real-time prices that could result in real-time inefficiencies (e.g. an intertie that is not fully scheduled) then that is something that the IESO will examine in more detail.</p>
Intertie Congestion Pricing	MAG Energy Solutions	Under method 2, what will happen with the over collected payment from the load?	The IESO will assess options for how to allocate real-time congestion rents under either method #1 or #2 in the detailed design phase of SSM as well as through the Transmission Rights Review which will begin later in 2018.

Design Element	Stakeholder	Feedback	IESO Response
Intertie Congestion Pricing	MAG Energy Solutions	<p>If HOEP in the IESO was exactly the same than the forecasted PD price, then method 1 and 2 would be equivalent. However, even if the system is forecasting well, it happens that forecasted PD prices do not equal final prices. This is true for current uniform price markets like the IESO, and it gets more complicated with zonal or nodal markets when congestion and losses are accounted for at the intertie. NYISO and CAISO are also using forecasted prices to evaluate schedules and have imprecise evaluations at times. In those cases, if a market participant did correctly predict final prices vs forecasted prices, he should be rewarded because he helped to improve market efficiency.</p>	<p>If the interties are not congested in the pre-dispatch, method #1 and method #2 will result in the same settlement prices.</p> <p>However, when the interties are congested in the pre-dispatch the amount of imports or exports does not depend on the offers or expectations of individual market participants as the intertie is constrained by transmission limits, not the extent of the bids or offers. In this situation, lower import offers by a market participant do not increase imports, they simply displace the offers of another market participant.</p>
Intertie Congestion Pricing	MAG Energy Solutions	<p>It is worth mentioning that the IESO would be the only market to penalize exporters/import suppliers who correctly schedule a transaction that brings efficiency to the market on a fully scheduled line. We have to keep in mind that a market participant who brings a better evaluation to the table adds value to the market.</p>	<p>The pricing methodology discussed in this design element only applies when interties are congested and are therefore already efficiently scheduled.</p>

Design Element	Stakeholder	Feedback	IESO Response
Intertie Congestion Pricing	Nalcor Energy Marketing	NEM would like the IESO to provide more information about the design of the DAM and FTR market so that the proposed methods of real-time intertie price formation can be properly evaluated.	<p>In jurisdictions with a day-ahead market, participants are able to protect against real-time pricing and congestion risk by entering into financially binding positions day-ahead. Participants who follow their day-ahead schedule in real-time are settled at the day-ahead price and are not exposed to real-time congestion or prices. Such jurisdictions also offer financial transmission rights that can protect against day-ahead intertie congestion risk. Those transmission rights settle based on day-ahead prices; jurisdictions with day-ahead markets do not provide financial transmission rights for intertie congestion in real-time.</p> <p>The IESO intends to undertake a review of its transmission rights market later in 2018 after the finalization of the SSM and DAM high-level designs. Among the topics that the review will assess is in which timeframe - day-ahead or real-time - should the IESO's transmission rights be settled?</p>
Intertie Congestion Pricing	Nalcor Energy Marketing	The examples provided in the intertie congestion pricing section of the slide deck do not provide enough information for us to understand the impacts of the two methods.	The IESO will revise the examples to provide greater detail regarding the pricing mechanics of both methods.

Design Element	Stakeholder	Feedback	IESO Response
Supplier Pricing	OPG	Information is required regarding: 1) How self-scheduling/intermittent generators would be paid. 2) Nodal point treatment for suppliers with injection points on both 115/230 kV 3) Cascading river systems; and 4) Impact on compliance aggregation 5) possible option for facilities within an aggregate to have a virtual node	The IESO is aware that specific decisions regarding these and other issues need to be made during high level and detailed design. The IESO will work to plan out when and how to answer these specific questions in the coming months. It may be that certain issues are best addressed during detailed design, while other broader concerns can be addressed in the high level design document.
Constraint Violations	OPG	Would the IESO confirm whether other jurisdictions cap market prices?	Yes, other jurisdictions have market price caps.
Constraint Violations	OPG	Would the IESO confirm whether the magnitude of the penalty values used by other ISOs are consistent with "reliability value"?	Whether the penalty prices employed in other markets are consistent with the "reliability value" will be addressed in future stakeholdering sessions. The March SSM materials identify the need to review methodologies and considerations used by other jurisdictions when determining appropriate penalty prices.
Constraint Violations	OPG	Would a \$2000/MWh cap on energy and OR prices prohibit a value that adequately represents the reliability value?	This will be assessed in future sessions as the IESO reviews methodologies and considerations used by other jurisdictions when determining appropriate penalty prices.
Out-of-market Operator Actions	OPG	Similar to SSM9, OPG believes actions need to be evaluated for their true cost to minimize uplifts and should not be limited by a price cap. On slide 94 of the December 11 presentation, the IESO presented a list of Out of Market Operator Actions and their respective price impacts in the unconstrained sequence. While the IESO's recommendation was to assess each	As discussed at the Dec. 11, 2017 SSM meeting, the IESO has assessed each of its out-of-market operator actions in order to ensure that the actions' impact on SSM prices accurately reflect supply/demand conditions and the capability of the transmission system. In many cases, the outcome of that assessment was consistent with the status quo. There are also some cases where the IESO is suggesting a change from the current practice. These preliminary decisions will be presented in the Stakeholder meeting scheduled for March 29th, 2018.

Design Element	Stakeholder	Feedback	IESO Response
		<p>control action, it also stated on slide 96 that it would likely keep status quo for SSM. OPG does not agree that the list for the unconstrained sequence currently used today is appropriate for a constrained SSM sequence and is suggesting the decision be reassessed. Additionally, OPG would ask the IESO to provide the list of out-of-market actions used for the current constrained sequence.</p>	
Price-Setting Eligibility/Operating Restrictions	OPG	<p>Would the IESO indicate whether restricted MW for hydro units was considered in its decision? Also, were ramp limited MW considered restricted MW?</p>	<p>The IESO recognized forbidden regions for hydroelectric facilities as being operating restrictions which are ineligible in setting price. Any other constraints that may apply to hydroelectric facilities, either as a result of the market participant or the IESO operator, that act to limit the minimum or maximum of the facility are also ineligible in setting price (consistent with other generating resources).</p> <p>Our jurisdictional scan revealed that none of the above operating restrictions are eligible to set prices in other markets, and as a result they were excluded from consideration as part of the options for the Price Setting Eligibility design element.</p> <p>Resources which are ramp limited are not included in the operating restrictions category, because these limitations are not associated with a restriction related to a fixed operating range of a resource. Resources which have exhausted their ramp capability and are not eligible to be dispatched for the</p>

Design Element	Stakeholder	Feedback	IESO Response
			next marginal MW are by design ineligible from setting price in a SSM market.
Mitigation Process	OPG	Slide 17 of the IESO's November 13 presentation states that one downside to the Conduct and Impact test is the potential for offers of a large supplier to trigger mitigation applicable to all suppliers within the region who had also failed the conduct test. Would the IESO provide further detail on how this region is identified?	The regions will likely be the IESO's electrical zones. There may be a need to define sub-regions within those electrical zones where the exercise of market power is a concern.
Timing of Application	OPG	Slide 19 of the November 13 presentation states applying mitigation on an ex-ante basis is a foundational feature of SSM, yet Slide 37 of the December 11 materials state NYISO performs mitigation ex-post. What is the reason NYISO does not test for pivotality or a binding constraint and mitigates ex-post if ex-post mitigation resettlement is deemed to be "complicated and disruptive"?	<p>The IESO is not aware of why NYISO does not test for pivotality or a binding constraint as part of their ex-post mitigation.</p> <p>For clarity, slide 14 of the June 29, 2017 SSM materials state that after-the-fact mitigation of offer prices - which entails resettling the entire market - would be costly and disruptive. Consistent with this issue, NYISO does not resettle the entire market as part of their ex-post mitigation. NYISO only adjusts the settlement outcomes of participants who failed the ex-post conduct and impact tests.</p>
Reference Levels	OPG	OPG supports the ability to rank options for reference price determination. OPG believes this should be applied for each individual resource for a predetermined effective period. OPG would appreciate	<p>Details on the implementation of these processes can be found at the following locations:</p> <p>CAISO Tariff (as of March 16, 2018), Section 39.7.1 "Calculation of Default Energy Bids"</p>

Design Element	Stakeholder	Feedback	IESO Response
		greater details on how CAISO and PJM implement this.	<p>http://www.caiso.com/Documents/ConformedTariff_asof_Mar16_2018.pdf</p> <p>PJM Operating Agreement (as of Mar 1, 2018), Schedule 1, Section 6.4.2, http://www.pjm.com/directory/merged-tariffs/oa.pdf</p>
Reference Levels	OPG	For ERUC and Day-ahead how do other jurisdictions allow Market Participants to identify unusual conditions that may cause a resource's offer price and/or physical attributes to be different from the calculated reference values? eg.) seasonally changing hydro conditions, combined cycle station operating in simple cycle mode, testing units, units with dual fuel options, equipment problems resulting in abnormal ramp rates, etc. Do other jurisdictions allow for these situations to be identified prior to mitigation therefore preventing unwarranted mitigation?	<p>All jurisdictions have processes in place that govern how they allow for modification of reference levels. The timing that each jurisdiction relies on in these processes is unique to each market.</p> <p>In general, jurisdictions allow for participants to communicate changes to their underlying marginal costs to the market monitor in advance of the mitigation process.</p> <p>For example, in ISO-NE, when modifying reference levels all data must be submitted and all consultations completed by no later than 5:00 PM of the second business day prior to the operating day for which the modified reference level will be effective (ISO-NE, Market Rule I, Appendix A, Section III.A.3). In other words, changes for a Wednesday need to be communicated by 5pm on the preceding Monday.</p>
Reference Levels	OPG	If a participant that has been mitigated is able to justify an offer price greater than the reference price (after the fact), please confirm whether a resettlement would occur for only the single participant or for all participants within the mitigation 'region'	Any resettlement would apply only to the settlement for the resource that was mitigated. The IESO would not resettle the entire market.

Please note that the information and responses provided by the IESO herein are for information and discussion purposes only and are not binding on the IESO. This document does not constitute, nor should it be construed to constitute, legal advice or a guarantee, representation or warranty on behalf of the IESO. In the event that there is any conflict or inconsistency between this document and the Market Rules, Market Manuals or any IESO contract, including any amendments thereto, the terms in the Market Rules, Market Manuals or contract, as applicable, govern.