Minutes of the IESO Technical Panel Meeting

Meeting date: 29/June/2021 Meeting time: 09:00 a.m. Meeting location: Video Conference Chair/Sponsor:Michael Lyle Scribe: Kathy Pearsall / Smarter Shift Inc.

Please report any suggested comments/edits by email to engagement@ieso.ca.

Invitees	Representing	Attendance Status Attended, Regrets, Teleconference
David Brown	Ontario Energy Board (Observer)	Attended
Jason Chee-Aloy	Renewable Generators	Attended
Ron Collins	Energy Related Businesses and Services	Attended
Rob Coulbeck	Importers/Exporters	Attended
Emma Coyle	Market Participant Generators	Attended
Dave Forsyth	Market Participant Consumers	Attended
Sarah Griffiths	Demand Response	Attended
Jennifer Jayapalan	Energy Storage	Attended
Indra Maharjan	Market Participant Consumers	Attended
Wendy Payne	Market Participant Consumers	Attended
Forrest Pengra	Residential Consumers	Attended



Representing	Attendance Status Attended, Regrets, Teleconference
Transmitters	Attended
Distributors	Attended
Market Participant Generators	Attended
IESO	Attended
Chair	Attended
IESO	Attended
	Transmitters Distributors Market Participant Generators IESO Chair

Agenda Item 1: Introduction and Administration

Agatha Pyrka, IESO, reminded participants of standard Microsoft Teams practices, including muting lines when not speaking and using the platform function to raise hands. She encouraged members to use their cameras when speaking if they were comfortable doing so.

Chair's Remarks:

The agenda was adopted on a motion by Sarah Griffiths.

The minutes of the last meeting were approved on a motion by Dave Forsyth.

The Chair noted that in June the IESO Board provisionally approved the Market Entry and Prudential Security batch of Market Rules.

Agenda Item 2: Engagement Update

Agatha Pyrka, IESO, reviewed the provisional TP schedule.

On the administrative changes for the 2021 Capacity Auction, education and the vote to post will be combined in June. The vote to recommend to the Board will be held in July.

On the improving accessibility of operating reserve, the education item is scheduled today. The vote to post is scheduled for in the July meeting, and the vote to recommend for the September meeting.

On the clarifications to the Market Rules (omnibus), education and the vote to post are scheduled for today. The vote to recommend will be held in July.

The monthly optional engagement update is posted on the Technical Panel website. Last week there was a half day on the Summit-Lite event and recordings are posted.

On the implementation side of the Market Renewal Program, the IESO presented its approach and rationale for the Market Power Mitigation Independent Review process in May. This will be documented in the Market Power Mitigation batch of Market Rules and Market Manuals, and published for stakeholder review in August.

The MRP session during the June Engagement Days provided an overview of how the IESO will engage with stakeholders on solutions for MRP implementation.

The Market Renewal Program Technical Advisory Group has held its first meeting. Topics included tool changes, timing for testing, and market participant segmentation for training and testing activities.

On the design side for the Market Renewal Program, the June Engagement Days offered an item on replacement of the IESO settlement system, including next steps for the settlement statement recalculation process and an overview of the changes to be introduced in the new system to accommodate location-specific settlement of global adjustment charges.

Agenda Item 3: Market Renewal Amendment Review Process

The Chair invited discussion about the proposed approach to bringing Market Rules to the Technical Panel with respect to the Market Renewal Program, as well as about the parking lot concept that was initiated at the last meeting.

Jessica Tang, IESO, said the proposal to implement the parking lot addresses two things:

- Questions around provisions of terms to be introduced in future batches. For example, the definition of a resource as it relates to energy storage

- Questions around provisions of terms that are acceptable within the current batch as it relates to future batches. For example, a definition of the shared daily energy limit and how the definition will work in light of its application in the Offers, Bids and Data Inputs (OBDI) as well as the Grid and Market Operation Integration (GMOI) batches.

The IESO will bring the parking lot list to every TP meeting in the future where MRP is an item.

Jason Chee-Aloy suggested that the scope of the parking lot be broadened. For example, there is a lot of new dispatch registration data optionality for some hydroelectric generators. It would be

preferable for the Technical Panel to see testing results before opining on the rules. He noted that the design team have been discussing linked resources for a long time. Ms. Tang noted that there are lots of engagement opportunities related to market participant testing and the intent of the parking lot is to focus it on specific market rule considerations. She added that specifically on Mr. Chee-Aloy's concern on hydroelectric generators, conversations with the Ontario Waterpower Association are progressing and their feedback is being taken into consideration.

Vlad Urukov asked who decides what goes into the parking lot. Ms. Tang replied that the IESO will make suggestions and be open to discussion with the Technical Panel. It will not be a unilateral decision.

Mr. Urukov asked if parking lot items would be made available to other stakeholders. Ms. Tang replied that she would think about a way to make the Technical Panel discussions more visible to other stakeholders.

Dave Forsyth noted an MRP-related concern he raised in November that price-responsive loads are unable to be part of a virtual portfolio. He suggested this be added to the parking lot. Ms. Tang said items to which the IESO has made a commitment will be added to the parking lot and the team will review the issue identified in November to determine if it is in fact a Technical Panel parking lot issue for MRP.

Robert Reinmuller suggested improving the Local Distribution Company (LDC) stakeholder process with respect to the technical aspects of changes, in parallel with policy changes. Implementation may have technical hurdles. For example, last year performance requirements for Distributed Energy Resources (DERs) were amended. The rules were published and the DERs proponents have no idea how to implement them. The industry gets stuck in the middle trying to mediate discrepancies. A second example relates to DER participation in ancillary services. Hydro One invited the IESO to a discussion in the LDC Working Group regarding how resources provide reactive power and the ability to manage the dynamics of the distribution system. The dynamics on the distribution side cannot be assessed. There are many technical challenges to work out in advance of making the rules. A third example relates to regulation services. Until technical requirements are clear (speed, timing, frequency) the LDCs cannot assess the dynamics of the distribution system. Due to the complexity, more technical stakeholdering is needed to ensure proper assessments and provide connection impact assessments to proponents. Ms. Tang noted that there is an LDC Preparedness Working Group intended to discuss these types of issues, specific to the MRP. As well, the Technical Advisory Group for MRP met for the first time in June.

Emma Coyle asked for clarification on whether the parking lot was designed to list issues with definitions so that the terms work with the drafting of the rule, or whether other issues identified by the Technical Panel could be added. She asked if, after a provisional vote to recommend and during the final vote, the panel would be limited to issues raised in the parking lot. Ms. Tang said there would be no limitation. The parking lot helps to keep track of issues so they don't get lost.

Mr. Chee-Aloy said the IESO has done a good job of pulling the detailed design together. He agrees with comments made by Mr. Reinmuller and Mr. Urukov. He suggested it would be helpful to consider that there are several implementation items directly in the purview of rule amendments that should be within the scope of the Technical Panel while others are indirectly related to rule amendments. All are needed to seamlessly implement the Market Renewal Program. He noted that

now is the time to decide on the best forum to ensure all stakeholders, including the Technical Panel, will address them. The Technical Panel will be comfortable with a rule amendment when the facts and implications are understood. Ms. Tang said there is a list of things pushed down from detailed design to implementation and those details are being addressed. It will be important to decide what the Technical Panel needs in order to evaluate the rules.

David Short replied to Mr. Reinmuller's earlier LDC and DER readiness comment. Mr. Short was familiar with the previously passed market rules affecting DERs and acknowledged the go-live communication with LDCs could have been improved. This was an implementation issue of the rules – not a design vs rules consideration. Going forward, the IESO may need more focus on the rollout plan for smaller changes.

Ron Coulbeck asked for the IESO to provide specific examples to help Technical Panel understand how implementation is going to work. For example, it would help to have specific understanding of how hydroelectric cascade resources would work. Ms. Tang said the IESO is having discussions with the Ontario Waterpower Association on this issue. The association has come up with specific examples and the IESO is working through those examples provided in broader stakeholder discussions.

Indra Maharjan asked for examples of other items in the parking lot. Ms. Tang said what came out of the last meeting created the first instalment of items, and these will appear in future batches. Items that come up through detailed design are posted on the MRP engagement webpage.

The Chair asked the Technical Panel for any feedback about the IESO's proposed approach to staging and timing of the Market Rule amendments. No feedback was provided.

Agenda Item 4: Administrative Changes for the 2021 Capacity Auction

Prior to the presentation by Vipul Agrawal, Mr. Urukov noted some confusion about roles and rules within the Capacity Auction link. For example, a PDF that is watermarked as being from the September 2019 auction has an effective date in 2020. Similarly, a document from the 2020 auction is dated June 2, 2021. It appears they have not been frozen appropriately. Mr. Agrawal noted the concern, stating that the rules that are live at the time of the auction are held. Mr. Urukov added that some of the language in the slide deck has been changed in the June 2, 2021 version.

Ms. Griffiths echoed Mr. Urukov's point. She tracked the Capacity Auction from the Market Rules page and noted changes had been made. Mr. Agrawal agreed to look into this. ¹

Mr. Agrawal summarized the proposed edits to the December 2021 Capacity Auction Market Rules and noted that small changes are also proposed for the Market Manual, such as clarifying the language for registration requirements.

Stakeholder feedback will be addressed in the updated training workbook.

¹ It was identifed that the links were incorrect for the December 2020 auction when navigated through the Market Rules webpage. The links have now been corrected. These proposed administrative Market Rule changes are for the December 2021 Capacity Auction and relevant for the May 1 2022, to April 30 2023 commitment period. These will be added to this webpage as another drop down menu at a later time.

Mr. Pengra asked how the IESO would make up for lost capacity when an obligation is unmet. Mr. Agrawal said there would be no immediate need to make up the loss. If necessary, the loss would be addressed in future Capacity Auctions.

Mr. Pengra asked how the cost of the daily clearing price compares with average market procurement rates, and if the clearing price is highly favorable compared with what is currently procured. Mr. Agrawal said there has been a year-over-year reduction in the clearing price. It stands today at roughly half the price of a single cycle gas turbine.

Mr. Urukov asked if a change being made for the upcoming auction would lead to a correction within a historical commitment period. Mr. Agrawal replied that a correction could be made if necessary as long as the change does not deviate from the agreed-upon auction design for that historical period. At the time of auction, the rules that are live are what participants are accountable to.

Mr. Urukov asked if the word "elected" represents only cases where someone has successfully received IESO agreement to execute a buyout (Chapter 7, Section 18.4.4). Mr. Agrawal said the buyout process must be initiated by the participant. The main administrative criterion concerns the leftover capacity after the buyout is complete. The IESO ensures that leftover capacity will be at zero or greater or equal to 1 MW.

Mr. Urukov agreed with the sentence added in Chapter 11 regarding Capacity Auction eligible import resource terminology, but noted that the word "otherwise" is confusing. Adam Cumming said the language was meant to mirror other Capacity Auction eligible resources and would consider the feedback.

Mr. Urukov asked if a distinction is required between capacity being obligated to a neighbouring control area operator or capacity obligated as a resource backed capacity export to another jurisdiction. There is currently confusion as to when one would fall into one category or the other. Mr. Agrawal committed to reviewing this.

On a motion by Robert Reinmuller, the Technical Panel voted unanimously to post the amendments for further stakeholder comment.

Agenda Item 5: Clarifications to the Market Rules (Omnibus)

Darren Byers, IESO, noted that the IESO will combine sessions as done in previous omnibus proposals and so will include a vote that it warrants consideration and a vote to post for broader stakeholder comment. The focus of the omnibus is typically on minor amendments such as correcting inconsistent formatting, grammatical errors, and typos, however in this package the IESO is including two proposals that may not be considered minor but nonetheless do not change market participant obligations. The expectation is that by including them here, the IESO can reduce the number of future amendment submissions TP members have to review.

Mr. Pengra had submitted some comments in advance of the meeting, that will be addressed in the next draft. Mr. Byers raised a couple of points that will help others in their review. First, corrections for the improper italicizing of defined terms were omitted to limit the size of the amendment proposal overall. As well, when developing this package, the amendments used in one proposal (I.e. R03) were not replicated in the other proposals (I.e. R04), so that it was clear what was being proposed in each.

On a motion by Ron Coulbeck., the Technical Panel voted unanimously that the Omnibus warranted consideration and agreed to post the proposal for stakeholder comment.

Agenda Item 6: Improving Accessibility of Operating Reserve

Jonathan Scratch, IESO, provided an education presentation on the item.

Ron Collins asked how spinning reserves fit in. Mr. Scratch said that the IESO schedules a mix of spinning (synchronized) and non-spinning (non-synchronized) operating reserve to meet its 10 minute operating reserve requirement. Mr. Collins asked how this is handled in a competitive bid. Mr. Scratch said that spinning (synchronized) reserve is more scarce and therefore a higher-priced product. Once fulfilled, the scheduling software moves on to schedule 10 minutes of non-spinning (non-synchronized), then to the 30-minute reserve. Anyone who can provide 10 minutes of spinning (synchronized) reserve can also be scheduled for 10 minutes of non-spinning (non-synchronized) as well as the 30-minute reserve.

Mr. Scratch said stakeholder engagement was launched in the first quarter of 2019. Five engagement meetings have been held before May 28, when rules were presented.

At times, the IESO cannot access the full amount of scheduled OR during an activation. For example, consider a dispatchable generator that is dispatched to 75 MW of energy and 25 MW of 10-minute OR, but output prior to contingency was only 85 MW. When the activation comes through, the IESO receives only an incremental 15 MW to help meet the supply-demand imbalance. This creates a reliability concern. Operators may need to activate more OR than the actual contingency amount which can come at additional ratepayer cost.

Joe Saunders asked if the problem might be due to issues outside the facility, that restrict its ability to activate for operating reserve. Mr. Scratch replied if the issue is within the transmission system the scheduling software would account for it.

Mr. Saunders asked if the IESO can see transmission system constraints ahead of time. Mr. Scratch replied that schedules are derived in consideration of those constraints.

A two-pronged solution to address the OR accessibility issue was proposed at the May 28 stakeholder engagement session. First is the idea of a settlement claw-back. The IESO proposes to compare how much OR a given resource was scheduled and paid for, with what it could have actually provided based on its available incremental generation availability. There will be a true up in the settlement to ensure that the resources are only compensated for the OR that was available at any five-minute dispatch. Second is the idea of modifying how the IESO dispatches OR activations to look not only at a resource's OR schedule, but also to examine the output or consumption of the resource at the time of activation.

Mr. Forsyth asked if the settlement claw-back would be automated all the time or would there be parameters for how much is overpaid before the IESO starts to process. Ran Peng, IESO, said it would be applied for every interval without activations.

Mr. Collins asked who would pay when the IESO needs to obtain more expensive supply. Mr. Scratch replied that the IESO rarely has to activate all of the OR at once. When the activation occurs there is

often more than enough OR. More is scheduled than is routinely activated as per the industry standard.

Mr. Urukov asked, with respect to the Appendix in Slide 24, Line 2, if more reserve is being received because it is operating at less than 10 MW than it should be. Mr. Scratch replied that when someone is generating less than dispatch, the OR dispatch tool will send the resource to the dispatch target based on the OR schedule it had. Mr. Urukov said it appears the tool will change with respect to where one is in terms of the outlook, but only when one is above the dispatch schedule.

Jennifer Jayapalan asked what is driving the change, why it is happening now, and if there will be a change made to the Dispatch Scheduling and Optimization (DSO) tool. Mr. Scratch said the Market Surveillance Panel highlighted a recommendation in the May 2017 report and stakeholdering began in 2019. There is no change being made to the DSO tool.

Mr. Forsyth asked if the amount of OR accessible is consistently less than the amount scheduled and whether there's a need to schedule more OR in order to be compliant with the industry standard. Mr. Scratch said spare energy is nearly always available to schedule sufficient OR. Mr. Short added that the challenge is that contingency recovery must occur within 15 minutes to avoid costly reliability standard changes to the amount of OR the IESO isrequired to schedule. However, being short of scheduled OR minute to minute is allowable for a short time.

Mr. Scratch said the redlined Market Rules were presented at the May 28 stakeholder engagement. Feedback was received and the IESO will respond within the next few weeks. The plan is to provide the draft Market Rules for review at the Technical Panel meeting in July.

Other Business

Mr. Chee-Aloy asked the Chair to comment on the initiative to phase gas out of the supply mix, and for information from the session that was recently held. The Chair replied he did not attend the recent session, but noted that the IESO is focused on laying out the potential impacts. Mr. Short said he attended the recent session and there are no implications with respect to Market Rules. Continued engagement is planned.

Ms. Coyle said the Technical Panel may have to consider what the IESO is doing with respect to the role of natural gas and how it impacts the Market Renewal Program and value to ratepayers.

The Chair said the job of the IESO is to inform the debate and provide relevant information rather than comment on the underlying policy decisions.

The meeting adjourned at 11 AM.

Action Item Summary

Date	Action	Status	Comments
March 23, 2021	In relation to MR-0448-R00 market rule amendments, the IESO will periodically review the availability of error and omissions insurance for negligence.	Open	
April 20, 2021	Report back on how to implement the parking lot list for MRP at the June Technical Panel meeting.	Closed	A proposed approach was discussed during the June meeting. The IESO and TP members will continue to discuss whether an item is appropriate to place in the parking lot as specific circumstances arise.