

IESO Technical Panel Meeting

Minutes of Meeting

Date held: January 23, 2018		Time held: 9:00 am	Location held: IESO Office, Toronto
Invited/Attended	Sector Representation		Attended; Regrets
Robert Bieler	Consumer		Attended
David Brown	Ontario Energy Board		Regrets
Ron Collins	Energy Related Businesses and Services		Attended
David Dent	Natural Gas		Attended
Barbara Ellard	IESO		Attended
Sarah Griffiths	Other Market Participant		Attended
Robert Lake	Residential Consumer		Attended
Phil Lasek	Industrial Consumer		Attended
Sushil Samant	Generator		Attended
Joe Saunders	Distributor		Attended
Bill Wilbur	Generator		Attended
Julien Wu	Wholesaler		Attended
Bing Young	Transmitter		Regrets
Chuck Farmer	Chair		Attended
Observers / Presenters			
Jo Chung	IESO		Attended
Josh Duru	IESO		Attended
James Hunter	IESO		Attended
Idalin McKenzie	IESO		Attended
Julia McNally	IESO		Attended
Hok Ng	IESO		Attended
Christopher Reali	IESO		Attended
Rebecca Short	IESO		Attended

Agatha Pyrka	IESO	Attended
Secretariat		
Susan Harrison	IESO	Attended
Prepared by: Mitchell Beer / Smarter Shift Inc.		

Agenda Item 1: Introduction and Administration

Chair's Remarks:

The Chair said comments recently received on the minutes of the Panel's November 22 meeting will be incorporated in the final version. On page 3, paragraph 2, when Mr. Wilbur recalled Mr. Wu's suggestion from a previous discussion, he was referring to the October 24 meeting of the IESO Board.

Mr. Bieler asked about the status of an action item that had been carried forward from a Panel decision in 2015. Susan Harrison, IESO said the item referred to a general conduct rule established in 2014 that was to be updated to reflect responsibilities directed to the OPA. She said the IESO's Market Assessment and Compliance Division has been working to address the issue as time permits, and the Secretariat has continued to report the item in progress so that Panel members don't lose sight of it.

The Chair reported that the agenda item on Station Service Obligations had been withdrawn due to comments the IESO received from Bing Young prior to the meeting. IESO staff determined that the feedback from Mr. Young on behalf of Hydro One Networks should be addressed before the IESO requests the Panel to post the proposed rule amendment for stakeholder comment. In response to a member's question, Christopher Reali, IESO said the comments were related to potential obligations that might be placed on market participants that were additional to what was intended by the amendment. IESO staff will seek further clarification of the stakeholder's concerns, and will assess whether existing processes and procedures are sufficient to address them.

The Chair said stakeholder discussions will continue, and the proposed amendment will be brought back for consideration at a future Technical Panel meeting.

The original draft of the agenda was also amended to include a discussion of the Technical Panel evaluation survey results.

Agenda Item 2: Stakeholder Engagement Update

Susan Harrison referred members to the monthly Stakeholder Engagement update in the meeting materials. She noted that a diverse group of stakeholders had provided considerable

feedback on implementation of the province's new Long-Term Energy Plan. The IESO plans to post its response along with its main implementation plan toward the end of this month.

A new engagement initiative is addressing proposed changes to the resource adequacy criteria. Ms. Harrison said a recent webinar and stakeholder meeting sought stakeholder feedback on a proposal to use extreme weather conditions to assess planned outages that affect resource adequacy. The IESO expects the proposed changes to improve the accuracy of planned outage scheduling. The webinar and stakeholder meeting generated feedback, to which the IESO will respond in due course.

At its first meeting of the year on February 21, the Stakeholder Advisory Committee will begin discussions leading into the IESO's 2019-2021 three-year business plan process. The SAC will provide feedback on the priorities that should be factored into the draft plan later this year. The IESO will provide a high-level overview of its priorities as a starting point for the SAC's feedback. Ms. Harrison encouraged Technical Panel members to filter their feedback on the plan through SAC members, or to attend the February 21 meeting themselves if they wished to.

The SAC meeting will also discuss Market Renewal, LTEP implementation, and feedback received on recent stakeholder initiatives.

The Chair said the IESO is required to submit its final LTEP implementation plan to the Minister January 31, and the document will be posted online once approved.

Ms. Harrison reported that Navigant has completed its mid-term review of the 2015 to 2020 Conservation First Framework and Industrial Accelerator Program and posted the draft on the Stakeholder Engagement web page for comment. She said incoming feedback will be consolidated in time for the SAC meeting.

The IESO has also issued a call for nomination for a community representative on the SAC. Nominations close February 9.

Jo Chung, IESO highlighted some potential market rule amendments the IESO expects to bring forward for Technical Panel consideration in 2018.

- The Capacity Exports initiative will further enable Ontario based resources to export their capacity. Design issues are currently subject to stakeholder engagement, and market rule amendments are expected in the second/third quarter of 2018.
- The Demand Response Working Group (DRWG) is developing a 2018 work plan that will include improved utilization of hourly demand response resources. The IESO, in consultation with the DRWG intends to put forward market rule amendments which will become effective before the beginning of the 2019 summer commitment period.

- The IESO will be assembling a minor amendment omnibus, to address typographical errors, cross-references, italicization of terms, and any other general revisions that are of a non-material, procedural nature.

Robert Lake asked whether there is a market for capacity exports. Barbara Ellard, IESO said Ontario already enables capacity exports to New York State and Quebec, pointing to new opportunities in which some interest has been expressed. Import/export capability is a component of the capacity auction approach, she said, so the IESO is taking some initial steps to put appropriate processes and approaches in place.

Agenda Item 3: Market Renewal Program Update

Ms. Ellard proposed to combine this topic with Agenda Item 7, and the Chair agreed.

Agenda Item 4: Regulation Based Settlement—Deletion of Rural and Remote Settlement and Debt Retirement Charge	
Presenter	Rebecca Short
Action	Review Amendment Submission MR-00434 and vote on whether to post the draft amendment for stakeholder comment

Rebecca Short, IESO reviewed the redlined draft rule amendment, in which all market rule references to rural and remote settlement and the debt retirement charge were deleted. She explained that the submission document had been reworked to eliminate confusion that had emerged from initial discussion, and to provide a bit more definitional detail on regulated settlement. She said the Technical Panel would be asked to vote on whether to post the draft amendment for stakeholder comment for a period of two weeks.

There were no questions from Panel members or observers.

Panel members voted unanimously to post the draft amendment for stakeholder comment for two weeks.

Agenda Item 5: Station Service Obligations	
Presenter	None
Action	Review Amendment Submission MR-00435 and vote on whether to post the draft amendment for stakeholder comment

Discussion was deferred to a future meeting of the Technical Panel.

Agenda Item 6: Enabling System Flexibility: Thirty-Minute Operating Reserve	
Presenters	Rebecca Short Hok Ng
Action	Review Amendment Submission MR-00436 and vote on whether to post the draft amendment for stakeholder comment

Rebecca Short recapped past discussion on this topic and explained that the purpose of the proposed rule amendment was to ensure consistency in the language used for operating reserve requirements. The inconsistencies in question were identified during work on the Enabling System Flexibility initiative, although the rule changes are not essential to that process. Following a presentation by Hok Ng, IESO, Ms. Short said the Technical Panel would be asked to vote on whether to post the draft amendment for stakeholder comment for a period of two weeks.

Mr. Ng recalled his presentation to the November 22 Technical Panel meeting, covering an overview on operating reserve and the current and upcoming IESO initiatives related to operating reserve, including the Enabling System Flexibility engagement initiative. He said the objective of the engagement was to identify solutions to meet system flexibility needs. That mandate led to a proposal leveraging existing market processes to increase requirements for 30-minute operating reserve, scheduling more resources accordingly, and possibly also resulting in additional resources being committed for flexibility.

He noted that the proposal to increase 30-minute operating reserve was a short-term response to an issue the Market Renewal is expected to address for the longer term.

IESO staff confirmed with in-house legal advisors whether existing market rules would permit the proposed increase to 30-minute reserve. Although the existing rules would permit the proposed increase to 30-minute reserve, IESO staff identified the opportunity to provide clarification and ensure consistency in the market rules related to operating reserve. IESO staff also checked with operations staff to ascertain the logistics of the proposed increase in 30-minute operating reserve and the impact on the market manuals. Market manual implications were detailed in an appendix to Mr. Ng's presentation to the Technical Panel.

The IESO presented the proposal to increase 30-minute operating reserve at the December 8 Market Renewal - Enabling System Flexibility stakeholder engagement session. Also at the December 8 session, the IESO discussed the market rule amendments. Since then, Mr. Ng said, one market participant has expressed support for using operating reserve to address interim flexibility needs, generally agreed with the proposed revisions to the market rules and market manuals, and recommended a revision to indicate a minimum megawatt quantity that would constitute a material change in forecast to trigger flexibility requirements, based either on demand that exceeded forecast or variable resources that became unavailable. The market

participant recommended that the IESO issue an advisory notice when such a situation occurs. Mr. Ng said the IESO would respond to that recommendation at the next stakeholder meeting.

Mr. Ng presented redlined versions of recommended amendments to Chapter 5, Sections 4.5.19 and 4.5.20. His slide presentation also cited the relevant directive from the Northeast Power Coordinating Council (NPCC). He said the purpose of the amendment would be to provide more clarity that the 30-minute operating reserve provision is a minimum requirement, consistent with both the IESO's 10-minute requirement and the NPCC directive.

Mr. Wilbur asked why the rule change was not considered essential. Mr. Ng said Section 4.5.3 covered the general requirement by spelling out a minimum for the combined 10-minute and 30-minute operating reserves. Mr. Wilbur said 4.5.3 appeared to him to allow a mix of 10-minute, 30-minute, and some other reserve, but could prevent the IESO from increasing the 30-minute reserve. Mr. Ng said IESO legal staff had interpreted the section as an overarching rule that allows the IESO to increase operating reserve. The proposed amendment would make the requirements for the 30-minute reserve more clear and consistent.

Mr. Samant reiterated Mr. Ng's previous point that the proposed amendment was not directly related to the Enabling System Flexibility initiative. Mr. Ng said the need for the amendment came up in the course of stakeholder engagement.

Referring to the requirement in Section 4.5.8 that the IESO maintain 10-minute operating reserve "at least equal to the largest first contingency loss sustainable on the *IESO-controlled grid*," and to a parallel provision in NPCC Directive #5, a member asked about the size of the largest contingency on the IESO system. Mr. Ng said that contingency was just under 1,000 megawatts.

Ms. Griffiths asked whether the IESO was also considering changes to the 10-minute operating reserve, or whether the 30-minute reserve was considered fast enough to ensure reliability within a five-minute cycle. Mr. Ng explained that the 30-minute reserve is appropriate since forecasting errors improve dramatically within the hour. The operating reserve can be activated if an anticipated quantity of variable generation is unavailable, or if system demand increases unexpectedly and a response is required within the hour. For that purpose, he said a 30-minute response time is sufficient to meet the system's flexibility needs—10 minutes would have been better still, but the IESO "didn't want to overdo it" in its response to the issue.

Ms. Griffiths said she supported the amendment as an interim solution, but suggested other resources in the province could provide the same service—and do so at less cost within the next few years. She said it would be unfortunate to wait for the conclusion of the Market Renewal process to get more flexibility resources onto the system. Ms. Ellard said the IESO had already launched an engagement on expanding participation in operating reserve.

Mr. Lake asked whether an outage would ever exceed the available flexibility resources. Mr. Ng said the IESO constantly monitors the transmission system configuration, and adjusts

contingencies as necessary to reflect flows across key interfaces. With one particular interface between the northern and the southern part of the province, IESO monitors the power flow which can change the contingency conditions. The IESO will then adjust the operating reserve requirements as required to cover any contingency changes.

Mr. Samant asked about the frequency of publishing reports or advisories and how often in a year would the IESO increase operating reserve. In response, Mr. Ng said the IESO publishes adequacy reports on an hourly basis in the day-ahead time frame. In the current day, results are published every half-hour. Market participants can monitor the adequacy reports to keep track of changing requirements. The IESO also issues market advisories to participants to flag significant changes. He said for system flexibility, operating reserve may need to be increased for about 100 days in the year.

Ms. Griffiths asked whether flexibility requirements vary by time of day, and whether that variance is usually consistent. Mr. Ng said flexibility needs have more to do with system conditions than time of day, and mismatches between supply and demand tend to occur more in the winter/spring period. Additional flexibility needs are most likely in periods of low demand or low variable generation, when the system is running mostly on base load and doesn't have other resources committed, or in periods of both high demand and high variable generation.

Mr. Wilbur asked over the 100 days how many hours would require additional operating reserve for flexibility. Mr. Ng said additional reserve needed for flexibility could range from a few hours to all hours in a day.

Ms. Short said the next step in the process was for the Technical Panel to vote on whether to post the proposed rule amendment for stakeholder comment. If the motion passed, she said the IESO would bring any stakeholder comments back to the Panel's March 6 meeting and seek a vote to recommend the amendment to the IESO Board. After that, the target was to bring the amendment forward to the April 11 Board meeting, with May 4 the earliest possible effective date for the amendment.

Mr. Samant asked whether the IESO will eventually look at other potential sources of operating reserve flexibility. Mr. Ng reiterated that the proposal to increase 30-minute operating reserve was an interim proposal, adding that the IESO expected to learn more about the value of operating reserve and bring those insights forward through the Market Renewal process. He drew members' attention to the appendix to his slide presentation, noting that slide 22 contained a sample revision to the standard adequacy report.

There were no questions from observers.

Panel members voted unanimously to post the draft amendment for stakeholder comment for two weeks.

Agenda Item 7: Technical Panel—Evaluation Survey Results and Agenda Item 3: Market Renewal Program Update

Ms. Ellard noted a couple of recent changes in the Market Renewal process, with the two Working Group co-chairs stepping down in early December, one of them leaving the group completely, and a new low volume consumer representative joining the MRWG. The decision on whether to appoint two new co-chairs is connected to a broader review on stakeholder engagement.

Ms. Ellard reported that stakeholders have asked the IESO to be a bit more pro-active in outlining the recommendations it expects to put forward among the options put forward to Market Renewal, so that feedback can be focused more clearly on those items. Accordingly, the IESO has identified its preliminary high-level design recommendations for the Single Schedule Market and Incremental Capacity Auction engagements. Stakeholders will still have the opportunity to react to those recommendations.

The process is now moving into some substantive design elements, she added, and the IESO is working with stakeholders on addressing their requests for more information on specific items. The goal is to issue high-level system design by the end of the year, but milestones are being reviewed. Many stakeholders have pointed out, and the IESO recognizes, that some key design elements are interlinked, and the high-level design will have to tie them together.

Ms. Ellard said the IESO has decided to defer its initiative on more frequent intertie scheduling and include it in a broader discussion on operability and flexibility. Accordingly, the work stream on operability will be combined with the discussion of future markets, to get a more complete view, Ms. Ellard said. Those discussions, as well, will take place in 2018, along with discussions on non-emitting resources and governance.

Ms. Griffiths asked whether the flexibility discussion originally covered under the Enabling System Flexibility initiative would now be part of a larger deliberation. Ms. Ellard said that shift would receive further discussion at the February 8 MRWG meeting, with the goal of properly coordinating and sequencing the various discussions that are in play.

Mr. Samant asked whether it was too early in the process to consider forming a subcommittee on resource adequacy. Ms. Ellard said it was clear from the webinar on the topic that further discussions were needed, but the precise process was still taking shape. Mr. Samant asked whether the discussions would take place in parallel with other Market Renewal processes. Ms. Ellard said the conversations would not be delayed, but broader design decisions would determine how quickly the process could move to more specific issues.

The Chair said discussions under the Market Renewal process align in some ways with the feedback the IESO receives from other stakeholder engagements. He added that there will be

more discussion of governance items, including the extent to which the IESO currently has the right authorities in the right places to align all the relevant interests. Potential issues include the current powers of the Board, the Technical Panel's role in advising the Board, dispute resolution, and the IESO's engagement processes. He assured members that the Board has very high confidence in the Technical Panel's ability to provide the advice it requires.

Another continuing point of discussion, the Chair added, has been the Technical Panel's readiness and ability to deal with the extensive sets of rules that will be emerging from the Market Renewal process. He said there are two specific concerns: ensuring that Panel members are sufficiently educated and informed about the overall process, and enabling the Panel to assess the amendments, the interactions between them, and their intended or unintended consequences. In that interest, he noted that the Panel has access to some very good resources: It can seek advice or information from any IESO staff, draw on the expertise of the three Panel members who also serve on the MRWG, review publicly-available documents that are already being produced and posted in quantity, or seek the advice of an independent consultant if it sees fit to do so. The IESO has also been working on a program of educational sessions on Market Renewal to help Panel members understand the details and subtleties of the process.

All of these resources have taken shape in advance of proposed Market Rule amendments that won't likely be brought forward for several months, the Chair noted. But it will be important to be pro-active in preparing for the most significant changes in the Market Rules in the last decade or more.

Mr. Wilbur asked whether the IESO could schedule an educational session to coincide with each Technical Panel meeting. Ms. Ellard noted that three or four recorded webinars are available on each major engagement topic. Mr. Wilbur asked whether condensed versions are available.

Ms. Griffiths asked when specific market design elements are expected to be brought forward, noting that there's a difference between reviewing a new set of rules—for example, on capacity markets—versus going through redlined revisions to existing rules. Ms. Ellard acknowledged the point.

The Chair thanked Technical Panel members for their participation in the survey

The Chair invited Susan Harrison to review the survey results. Ms. Harrison thanked Panel members for their written comments, in particular, noting that the responses had indicated high levels of satisfaction with the administration of Technical Panel meetings, the performance of the Panel as a whole, and the mix of Panel members. One respondent suggested increasing the size of the Panel. Most respondents said the information they receive is adequate and timely, that they're comfortable preparing for meetings, and that meetings are open and inviting.

Some Panel members said they would welcome more context and rationale for recommended changes to the Market Rules, in written materials or in verbal briefings to Panel meetings. Some

members expressed concern about the quality of changes that will be brought forward as a result of Market Renewal, and about the Secretariat's ability to deliver its customer quality of background material in light of the additional volume. Some members asked for more lead time to read in, particularly on more complex topics.

Members expressed confidence in the Panel's ability to advise the Board on proposed Market Rule amendments, as long as they receive sufficient information and education. They said they would welcome more formalized process for conveying the rationale behind Board decisions.

Some members said they would welcome more in camera discussions to prepare for meetings, more education at future meetings, and more use of meetings technology, including Skype or videoconferencing for out-of-town participants. Members expressed a preference for face-to-face deliberation, with Skype as a second choice.

Members said they prefer to receive educational content in person during scheduled Panel meetings or special sessions, particularly if the subject matter is more complex, but indicated that webinars and teleconferences will suffice for less technical matters. Respondents said information items should be brought forward to the group as a whole: while there is some value in fostering conversations among like-minded stakeholders, there was general agreement that members can learn from each other's comments and concerns.

There were no additional comments from Technical Panel members on the survey.

The Chair said he would share members' feedback with the Board at its February 27 meeting, along with full survey results from both the Technical Panel and the Stakeholder Advisory Committee.

He acknowledged the value of in camera sessions, notwithstanding the IESO's mandate for transparency at public meetings, particularly in preparation for amendments to Market Rules. The Chair and Ms. Harrison will take action on the request.

The Chair said he would also convey the Panel's interest in better understanding the rationale behind Board decisions on recommended Market Rule amendments. While he acknowledged the value of conveying the context for more contentious decisions, the Chair said it might not be realistic to expect decisions with reasons. He said he would explore with the Board whether he could convey the flavour of discussions back to the Panel.

The Chair expressed general satisfaction with the composition of both the Technical Panel and the Stakeholder Advisory Committee, while acknowledging the concern he sometimes hears about insufficient representation of low-volume consumers. He said the IESO would address that issue as part of a broader look at responsive engagement strategies. For the Technical Panel, it will be important to construct the membership in a way that recognizes changing technologies and markets, and ensures that the appropriate range of views is represented. The Chair said a draft of an updated engagement strategy would likely be released in the spring.

There were no questions or further comments from Panel members.

Agenda Item 8: Other Business

There was no other business. The meeting adjourned at 10:22 AM, with the next Technical Panel meeting scheduled for March 6, 2018.

Action Item Summary			
Date	Action	Status	Comments
January 23, 2018	The IESO will investigate the Technical Panel's request for more in camera sessions.	Open	
Dec. 1, 2015	The IESO will provide an update to the Panel regarding the potential timelines and impacts of changing the reference to the OPA within Chapter 1 of the General Conduct Rule.	Open	