

IESO Technical Panel Meeting

Minutes of Meeting

Date held: June 27, 2017	Time held: 9:00 am	Location held: IESO Office, Toronto
Attendance	Member Representative	Attended; Regrets; Teleconference
Robert Bieler	Consumer	Attended
Ron Collins	Energy Related Businesses/Services	Attended
David Dent	Natural Gas	Attended
Barbara Ellard	IESO	Attended
Sarah Griffiths	Other Market Participant	Teleconference
Brian Kelly	Generator	Regrets
Robert Lake	Residential Consumer	Attended
Martin Longlade	Industrial Consumer	Teleconference
Joe Saunders	Distributor	Attended
Bill Wilbur	Generator	Attended
Julien Wu	Wholesalers	Attended
Bing Young	Transmitter	Attended
Chuck Farmer	Chair	Attended
Observers/Presenters	Company Name	
Gabriel Adam	IESO	Teleconference
David Brown	Ontario Energy Board liaison	Attended
Tom Chapman	IESO	Attended
Jo Chung	IESO	Attended
Josh Duru	IESO	Attended
Mark Hartland	IESO	Attended
Darren Matsugu	IESO	Attended
Herman Mo	OPG	Attended
Silviu Motoc	IESO	Attended
Greg Osborne	NRStor	Teleconference
Agatha Pyrka	IESO	Attended
Mark Tinkler	Customized Energy Solutions	Teleconference
Steven Voorberg	OPG	Attended
Peter Wiebe	IESO	Attended
Secretariat		
Jason Grbavac - Acting	IESO	Attended
John Rattray	IESO	Attended
Prepared by: Mitchell Beer / Smarter Shift Inc.		

All meeting material is available on the [Technical Panel webpage](#) on the IESO web site.

Agenda Item 1: Administration and Agenda

Chair's Remarks:

The Chair welcomed participants and invited them to introduce themselves, beginning with new member and transmitter representative Bing Young, Director of System Planning at Hydro One.

The Chair said the IESO's new CEO will plan to attend a future Technical Panel meeting. He reported that the Secretariat had completed the process of adjusting members' terms of office to October 31 of each year to align the call for nominations for Panel members so that it happens once per year.

The Chair reviewed the Agenda and invited any additional items. There were none.

Agenda Item 2: Stakeholder Engagement Update

Jason Grbavac, IESO Stakeholder Engagement drew members' attention to the IESO Engagement Update chart that was recently posted to the Active Engagements page on the IESO website.

Barbara Ellard, IESO, recapped recent Market Renewal engagement initiatives with respect to the Single Schedule Market and Incremental Capacity Auction initiatives. Each engagement initiative began with a fundamentals session to ensure that all participants had a common knowledge base, followed by an exploration of options to be discussed throughout the engagements.

Ms. Ellard noted that the stakeholder engagement framework for the Market Renewal process has ensured that the Market Renewal Working Group is responsible for integration, strategy, and to address any contentious issues related to design of the different initiatives. She added that in addition to the working group, the IESO has established various stakeholder engagement initiatives under the market renewal program which will be the primary vehicles for the design discussions. By late summer or early fall, IESO is committed to holding a wider stakeholder engagement initiative that looks at how the different elements of Market Renewal will be integrated. Ms. Ellard said IESO is staffing up internally, to ensure that the right resources are available to support the Market Renewal Program.

The strategic topics on the Market Renewal Working Group's agenda tie in with broader sector issues like governance, long-term planning, regional planning, future market structure, and the future role of renewable and clean resources. Consultants from Navigant have been engaged to provide advice on these areas to support the Working Group's efforts in identifying the elements and linkages for the broader Market Renewal Program.

Ms. Ellard said the Working Group's four priorities for the next year are to:

- Adhere to its established schedule for the first two engagements which are Single Schedule Market and Incremental Capacity Auction and deliver designs by Q3-2018
- Produce a report that outlines what Market Renewal is, what it is not, and the broader strategic issues that tie in to the process
- Bring the Enabling System Flexibility engagement under Market Renewal and develop an interim market-based solution to deliver flexibility in the near-term
- Similarly, bring the Capacity Exports engagement under Market Renewal to deliver value for the ratepayer through market-based mechanisms

The Chair asked when the Technical Panel could expect to see draft rules from the Market Renewal Program. Ms. Ellard said documents would likely begin to flow later in 2018, adding that discussions are underway whether it makes more sense to develop proposed market rules packages and manuals for specific issues in tandem with stakeholder discussions or in sequence.

Mr. Wilbur asked whether the Panel would have access to rules-specific education. The Chair said members are welcome to participate in Market Renewal sessions, but that educational sessions with IESO staff and consultants would also be scheduled in tandem with Panel meetings.

Mr. Lake referred to day-ahead market rules developed 13 to 14 years ago and asked whether the current Market Renewal process would be a brand new start. Darren Matsugu, IESO, said a day-ahead market was introduced in 2005, alongside IESO's existing two-schedule system, but the combination of systems produced major complexities over time. Now, the Market Renewal process is building on the good work done many years ago, but starting from the proposal that the system will be working with a single-schedule market. IESO will also benefit from other jurisdictions' experience with day-ahead markets over the past 10 years, and is committed to drawing all available insights from best practices and lessons learned.

Agenda item 3: Mandatory Requirements for Regulation Service Providers (MR-00432)	
Presenters	Jo Chung, Silviu Motoc
Action	Vote to determine that this rule amendment warrants consideration.

Jo Chung, IESO, introduced Senior Engineer Silviu Motoc, who delivered a presentation on proposed changes to mandatory performance requirements for regulation service providers.

Mr. Motoc explained that IESO defines regulation service as balancing load and generation on a second-by-second basis, evening out small variations in supply and demand that occur within each five-minute dispatch period. Resources that provide this service operate in a very demanding environment that is fairly taxing on equipment. Regulation traditionally came from transmission connected generation units, typically hydroelectric units that reserve a small part of their capacity for regulation and share the service between multiple units, a process that had less impact on the lifespan of the participating units.

As alternative technologies evolved, Mr. Motoc said, IESO contracted a number of projects to test their viability as regulation service providers. For the tests, these technologies were not scheduled as part of the main regulation fleet, but were instead supplementing it, such that their failure would not significantly impact the IESO's ability to maintain the reliability of the IESO-controlled grid. The alternative technologies proved capable of providing regulation in a reliable fashion, so when the Ministry of Energy instructed the IESO to procure energy storage, regulation was identified as one of the ancillary services to be provided. When they go in service, the energy storage projects procured by the IESO will most likely become part of the main regulation fleet.

By the time of this meeting, most of the regulation providers selected during the energy storage procurement proceeded to connection assessment. Projects of that size connected to distribution systems generally provide energy as "self-schedulers" and their impact on reliability of the IESO-controlled grid is negligible. But when integrated into a regulation fleet with a total of 100 MW of regulation resources for the entire province, the same small, distribution connected project could have a significant impact on the reliability of the IESO-controlled grid if it disconnects following some events that normal regulation providers can ride through.

The IESO included clear frequency and voltage ride through requirements in the connection assessment, and all the smaller providers confirmed they can meet those requirements. Applications began to arrive toward the end of 2016, but by mid-March it became clear that some of the market rules lacked clarity on frequency and voltage ride-through capabilities. The proposed amendment is designed to increase the transparency and consistency of performance requirements for all registered facilities providing regulation, regardless of size and connection location, to ensure dependable service from all regulation providers. It will require all regulation providers to meet three categories listed in Appendix 4.2 of the market rules: off-nominal frequency, speed/no-load frequency regulation, and voltage ride through. (*Detailed requirements appear on page 6 of presentation IESOTP-20170627-3b-MR-00432.*)

In reply to questions from Mr. Saunders, Mr. Motoc clarified that the amendment is designed for smaller projects that have been showing up within distribution systems, and have already been reviewed through connection impact assessments. Mr. Chung explained that, while the system impact assessment rules already allow the IESO to require the three categories of regulation service for reliability, the amendment is needed to make the performance standards clear and transparent.

Mr. Bieler asked whether IESO expected any providers to respond to the administrative change by asking to revisit their offtake arrangements. Mr. Motoc said the changes are purely administrative, given that all the projects IESO has assessed so far have been able to meet the requirements. That's partly because the equipment they use is produced by manufacturers that serve multiple North American jurisdictions and are familiar with standard requirements for distribution connected regulation providers. The amendment would simply make it clear up front that all regulation providers are subject to the three performance requirements, regardless of size or connection point, and prevent any risk of a developer and supplier signing a contract without the supplier fully understanding the IESO expectations that must be met.

Mr. Wu asked whether the market rules apply to regulation service providers from outside the province. Mr. Motoc said any outside provider would have to register in the market and meet the same set of requirements.

In response to a question from Mr. Saunders, Mr. Motoc clarified that IESO is currently compliant with NERC requirements.

Mr. Wu asked whether regulation service would tie in with Market Renewal. Ms. Ellard said it might over the longer term.

Presuming a warrants consideration vote at today's meeting, Mr. Chung said IESO would expect to present a redlined draft amendment at the Technical Panel's August 15 meeting, with a recommendation to post the proposed amendment for stakeholder comment.

The Panel voted unanimously in favour that the proposed amendment warrants consideration, with the Chair noting Mr. Kelly's affirmative vote by proxy.

Agenda Item 4: Market Rules True-Up—Disconnection Orders (MR-00431)	
Presenters	Josh Duru, Peter Wiebe
Action	Vote to determine that this rule amendment warrants consideration and vote to post the draft rule amendment for broader stakeholder comment.

Josh Duru, IESO, explained that the amendment was designed to explicitly identify the obligation of transmitters, distributors and other market participants to comply with disconnection orders issued by the IESO to give effect to a suspension, termination order, or resulting from persistent breaches of the market rules. In addition, the amendments would clean up references and improve consistency within the grid connection requirements of the market rules.

Peter Wiebe, IESO, said recent discussions with a newly-registered market participant had drawn attention to the fact that the market rules contain no obligation for a host market participant to disconnect an embedded customer. The rules already cover transmission and distribution facilities, as well as load and generation facilities operating within distribution systems, but not generation or load facilities who are embedded within a host participant.

Mr. Saunders noted that market rules are already in place for transmission and distribution facilities and asked whether the amendment was intended for other market participants. Mr. Wiebe confirmed that facilities located within distribution systems are already covered by the existing market rules.

Mr. Saunders asked whether the other market participants involved would already be located or embedded within distribution systems. Mr. Wiebe said the amendment is directed to consumers and other load facilities that do not feed into the grid, not to any load centre connected to a distribution system.

Mr. Saunders explained his concern: that if a market participant within a distribution system had to disconnect, the distribution system would have to be able to take up the existing load, and that requirement could create a wider shortage of supply. Mr. Wiebe said no disconnect under the intended amendment would have an impact on the distribution side of the system.

Mr. Wilbur noted that the current market rule allows for disconnection orders to be issued by voice communication and questioned how this process would be impacted in this change. In addition, Mr. Longlade said the current rules looked to have been written to apply to any market participant. He said it's important for all parties with an interest in a disconnection order to know what's going on, so the process can unfold smoothly and with no surprises. He asked whether current provisions under Section 6.5A of the market rules would ensure that a third-party provider is aware of a disconnect order if it is conveyed to a distributor or transmitter through the IESO.

Mr. Wiebe replied that, functionally, nothing happens immediately and no one is surprised—the process always involves coordination among all parties to set a date for disconnection, which then becomes the effective date of the disconnection order. Mr. Longlade agreed that disconnection processes he had witnessed had always been orderly, but expressed concern that the allowance for voice communication gave no indication of who within IESO had to issue the notice, and who within a participant organization had to receive it. At the level of operator-to-operator communication, he said the provision allowed a high degree of flexibility. The paramount goal, he said, should be to avoid confusion and potential conflicts.

Mr. Collins said the rule amendment should clarify that the intent is not to order an embedded asset to be dispatched off. As generation assets get smaller within a distribution system, he said, it's very important to LDCs to ensure the system operates properly, and the rules must be stated plainly enough to avoid misinterpretation, while still allowing IESO to take control in case of an emergency.

Mr. Chung said the concepts in the language under discussion were subject to stakeholder review in 2008, but the resulting rule omitted any explicit obligation for transmitters and distributors to apply the order. Mr. Collins said he understood that concern, but noted that IESO also had an opportunity to amend the language to avoid a future issue.

Mr. Duru said IESO would take back and consider Panel members' comments.

The Panel voted unanimously that the proposed amendment warrants consideration, with the Chair noting Mr. Kelly's affirmative vote by proxy.

The Panel then deemed it premature to vote on whether to post the draft rules for stakeholder comment. The Chair noted that the IESO would take this discussion into consideration and would bring the proposed rule amendment back to the Technical Panel for consideration at the August 15 meeting.

Agenda Item 5: Demand Response Auction Update	
Presenters	Josh Duru, Tom Chapman
Action	Information item

Tom Chapman, IESO, provided the Panel an overview of work being undertaken through the Demand Response Working Group to increase economic utilization of demand response, and proposed Technical Panel timelines. He reported that IESO has been working closely with stakeholders to shift the way it notifies resources when it plans to activate demand response, as part of a broader transition to the market that has been under way for a number of years.

The Demand Response (DR) Auction is IESO's primary mechanism for selecting the lowest-cost set of DR resources, Mr. Chapman said. Participants competitively quote price and quantity by IESO zone for a commitment period, then participants' capacity obligations and auction clearing prices are determined by IESO's auction clearing engine. Across the two DR Auctions that have taken place so far, IESO has seen increases in participation and available megawatts.

Mr. Chapman said the forthcoming amendments will be important to fully utilize the DR procured through that process. He explained that the auction clears resources to participate in the summer commitment period and/or in the winter period. In exchange for capacity payments, participants are obliged to make themselves available for demand response during a predefined DR Auction availability window within the commitment periods for which they have a position.

The province currently has about 2000 megawatts of DR, including 470 MW from the most recent auction in December. The system also has access to about 1,000 MW in the Industrial Conservation Initiative (ICI). As part of the broader transition, IESO also has about 160 MW of DR under contracts that will be expiring by November 2018.

Mr. Saunders asked how changes to the ICI program would affect the way entities participate in the system. Mr. Chapman said he didn't have access to specific data, but noted that the program had expanded to a wider range of potential facilities.

Mr. Chapman said some of the market rules for activating and dispatching demand response had already been updated in anticipation of the shift to the new market-based mechanism. But experience over the last couple of years indicates that the method of placing resources on standby, then activating them, may present a barrier to their actual participation in the market. He outlined key features of the system as it now stands:

- To receive a standby notice, a resource must have four consecutive hours available at the bid price for the load. That, in itself, is a rare occurrence in the day-ahead market.
- If the system needed a standby resource for that length of time, the resource would receive an activation notice, then be activated for the four-hour period.

Improved utilization of DR emerged as a priority issue when the Demand Response Working Group put together its 2017 work plan. The key criteria for any system changes were to:

- Support efficient dispatch and evolve the effectiveness of demand response, to more seamlessly insert resources into the system when the approach is more cost-effective than firing up a generator
- Increase the number of hourly activations, to demonstrate the value of DR when its use is economic
- Balance the realistic operational needs of stakeholders and IESO
- Introduce changes that can be implemented with the next DR auction in December 2017.

In May, the DRWG sought stakeholder feedback on six possible solutions for improving utilization. In general, stakeholders indicated that standby notices should continue to be a feature of the system, and the requirement for an activation should be reduced from a fixed four hour block to a one to four length. Based on this input, the working group will present a final proposal to stakeholders in July.

In response to a question from Mr. Wilbur on what else the IESO can do to improve the utilization of these resources, Mr. Chapman said the working group had considered implementing a price threshold that aligns the number of standby notices with likely activations.

Ms. Griffiths said it would be useful for stakeholders to discuss the price threshold for placing DR resources on standby, and indicated that her constituency looked forward to engaging with IESO on that point.

Mr. Chapman said the working group is also looking at hours of availability, after determining that four consecutive hours is often a difficult expectation for resources to meet, and one that does not often come up under regular market conditions. Stakeholders were generally supportive of reducing the availability requirement from four hours to one, in tandem with the standby notice.

Mr. Collins asked whether economic analysis had pointed to assets that are historically easier to run for four hours, rather than one. Mr. Chapman said different stakeholders had expressed preferences for four- versus one-hour blocks.

Overall, Mr. Chapman said, the emerging changes have the support of the majority of stakeholders involved in these discussions, and the DRWG believes they will help demand response play a more active role in the Ontario market. The July working group meeting will address a number of remaining issues, including the price threshold for placing resources on standby. The working group will report back to the Technical Panel in August, with a goal to request IESO Board approval of the proposed market rules in time for the December 2017 DR auction.

Mr. Wu asked whether DR standby orders are analogous to the standby process for generators. Mr. Chapman explained differences between the two systems, referring to DR resources' obligation to provide demand response within an availability window and the cost guarantees available to generators. He added that there is interest in combining the two systems over the longer term, potentially by 2020, given the added flexibility that system operators in other jurisdictions have gained by taking advantage of the most flexible DR resources.

Mr. Duru clarified that the proposed timelines will require the Technical Panel to vote to post the proposed DR Auction rule amendments for stakeholder comment at the August 15 meeting. Mr. Longlade asked that all stakeholder feedback be provided to Panel members in advance, and the Chair agreed.

peaksaver Transition to the DR Auction

Mr. Chapman described that the funding for the *peaksaver* program is scheduled to expire at the end of this year after 10 years of operation. The IESO is working with the Demand Response Working Group to facilitate *peaksaver* resources participation in the DR Auction. The working group has identified this transition as a priority for 2017.

peaksaver resources total about 160 megawatts, Mr. Chapman said, and while the enabling devices are still installed on residential air conditions, not all the devices are always functioning but the system can supply 100 MW or more of demand response. Simply adding the megawatts to the auction could lead to a number of challenges for end users and local distribution

companies, including access to data and resource availability, and the DRWG wants to avoid any risk of driving up the system clearing price and adding unnecessary costs. There is some interest in opening up a role for LDCs in aggregating consumer-level DR resources within their service areas. The topic is on the agenda at the DRWG's July meeting.

The meeting adjourned at 10:45 AM.

Next Panel Meeting: Tuesday, August 15, 2017

Action Item Summary			
Date	Action	Status	Comments
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	
March 21, 2017	The IESO will provide an update on recent energy arrangements between Ontario and Quebec.	Closed	The IESO referred Panel members to an update that was posted along with materials for the May 10 SAC meeting.
June 27, 2017	IESO to discuss plans for briefing sessions related to expected market rule changes under Market Renewal Program	Open	