IESO Technical Panel Meeting Minutes of Meeting

Date held: June 26, 2018		Time held: 9:00 am		on held: Office, Toronto		
Invited/Attended	//Attended Sector Representation			Attended; Regrets		
Robert Bieler	Consumer		Absent			
David Brown	Ontario Energy Board			Absent		
Ron Collins	Energy Related Businesses and Services			Attended		
David Dent	Other Market Participant			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		
Jessica Savage	IESO			Attended		
Bill Wilbur	Generator			Attended		
Julien Wu	Wholesale	r	Attended			
Bing Young	Transmitter		Attended			
Michael Lyle Chair				Attended		
Observers / Presenters						
Alexandra Campbell	l IESO			Attended		
Jo Chung	IESO	IESO		Attended		
Warren Hill	IESO	IESO		Attended		
Jason Kwok	IESO			Attended		
Samantha Tam IESO				Attended		
Secretariat						
Reena Goyal IESC				Attended		
Jason Grbavac IESO				Attended		
Prepared by: Mitchell Beer / Smarter Shift Inc.						

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IESO Technical Panel



Agenda Item 1: Introduction and Administration

Chair's Remarks:

The Chair welcomed participants and invited comments on the agenda. There were none.

Mr. Wilbur proposed two changes to the minutes of the previous meeting, under the agenda item dealing with Capacity Exports, based on text he had previously submitted to the IESO Secretariat. The minutes were accepted as amended.

The Chair provided an update on the action item on the reference to the OPA within Chapter 1 of the General Conduct Rule, indicating that the IESO's Market Assessment and Compliance Division (MACD) would provide an update to the Technical Panel by the end of the year. He also reported that the list of Energy Storage Advisory Group members had been posted online.

The Chair reminded Panel members of the Market Renewal education session later in the day, to be held in camera from approximately 10:30 AM to 1:00 PM. He said the session would include a short discussion of the Technical Panel's request for in-camera meetings, reviews of Market Renewal initiatives under the Capacity and Energy work streams, and a short presentation on governance issues arising from Market Renewal engagements to date.

The Chair drew members' attention to a resolution from the Board of Directors meeting two weeks previously, where two market rule amendments were approved following recommendations from the Technical Panel. While neither of the amendments were controversial, he said the form of resolution reflected Panel members' interest in greater transparency on the rationales for Board decisions—an issue that was also to be addressed during the in-camera education session later in the morning.

The IESO will be issuing a call for nominations in Thursday's weekly bulletin for a generator representative, as well as for a second consumer representative to the Technical Panel, in light of significant changes to Market Rules that will likely result from the Market Renewal process and the need for the panel to reflect a broader range of consumer interests. The Chair said proposed appointments would be put forward at the IESO Board of Directors August meeting.

Agenda Item 2: Stakeholder Engagement Update

Jason Grbavac, IESO thanked the many Technical Panel members who attended the IESO's Electricity Summit June 11. He referred members to the engagement update in the meeting package, noting that the in-camera education session would feature a more detailed discussion on stakeholder engagement activities related to Market Renewal. There were no questions on the engagement update.





Agenda Item 3: Capacity Exports				
Presenter	Jo Chung, Alexandra Campbell, Warren Hill			
Action	Review stakeholder comments on amendment proposal MR-00420-R00-R01-R02 and vote on whether to post the proposals for stakeholder comment for a period of two weeks, ending on July 12, 2018.			

Jo Chung, IESO introduced the recommendation that the Technical Panel vote to present the proposed amendment for stakeholder comment for a period of two weeks ending July 12.

Warren Hill, IESO delivered a presentation that included a recap of the pertinent discussion to date, an update on stakeholder engagement related to the proposed amendment, an overview of proposed market rule and market manual changes on transmission outages, and a review of next steps.

Mr. Hill explained that the reason for the refinement to proposed section 20.4.2 of Chapter 7 within MR-00420-R00 results in a more limited ability for scheduling to deviate from the economically determined schedule. If the IESO is not in a shortage situation, exports will be scheduled on an economic basis, and the IESO will prorate \$2,000 bids from all exporters as normal, without giving special treatment to the capacity export bid.

Mr. Wu asked how this concept interacts with intertie pricing concepts being discussed within the Single Scheduling Market (SSM) discussions of Market Renewal. Specifically, he asked what the incentive would be for exporters to bid \$2,000 in real-time, if the exporter would not get their money/be paid according to their bid. He indicated that with the proposed changes under SSM, that there won't be as many high priced exports going forward. Mr. Hill responded that for capacity exports, that market participants are required to submit a bid at the maximum market clearing price (MMCP) in order to receive curtailment treatment as a called capacity export. The purpose of the change to section 20.4.2 was to reflect that in the scenario when Ontario is not in a shortfall situation, that similarly-priced exports that are bid at \$2,000, including capacity export bids would be pro-rated. If Ontario is in a shortfall situation, the IESO will specifically constrain-on the capacity export to ensure the total flow of energy matches the called energy to the neighbouring jurisdiction.

Mr. Lake asked whether the changes to SSM would produce more or fewer capacity export opportunities for generators. Mr. Hill said the SSM changes and refinements to section 20.4.2 should be decoupled. The changes to section 20.4.2 reflect the fact that interfaces will be scheduled economically to the greatest extent possible, and do not impact a generators ability to offer externally under a capacity export.





Mr. Young indicated that he generally understood the overall timing related to capacity exports as they relate to transmission outages – generators can make a request for a capacity export 6 months in advance, commitment periods can be as long as 12 months. A generator is committing to export firm capacity for a total of 18 months. Mr. Hill confirmed that a commitment period of up to 12 months can occur, noting that during the 6 month review period, market participants will have the opportunity to change a resource (i.e., the backing generator) as long as the resource is part of the same facility, if required to respect an outage. If an outage comes up prior to IESO approval, transmitter outage conflicts may be avoided. Mr. Hill added that generators will need to talk to their transmitter in advance of submitting a capacity export request to see if any planned outages will impact their facility. Mr. Hill indicated that the equipment in question relates solely to that which directly connects the resource to the IESO controlled grid. It does not include equipment which constrains or bottles the resource. Mr. Young said with generators' capacity effectively locked up for the whole year if approved, and if transmission outages are unknown until closer to the end of a commitment period, that he needs a better understanding of any potential timing issues. Mr. Young said there still appeared to be issues to sort out, and asked whether the details would be included in the market manuals. Mr. Young indicated the need to see market manual content prior to the Technical Panel's vote to recommend the market rules at the Aug 14th panel meeting. Mr. Hill indicated that he would do his best to bring forward market manual details as soon as possible.

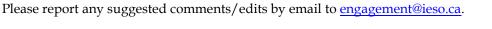
Mr. Wilbur commented that if market manual details are not provided in advance of the Technical Panel vote to recommend vote in August, that there will be an issue. The Chair said there would be time before the Technical Panel's August meeting for the capacity exports team to do what they can to provide the requested manual details.

Mr. Samant asked whether a market participant would have to interface directly with Hydro One at some point. Mr. Hill indicated that they should be doing so in order to determine if there are outages which might affect the resource. Mr. Samant asked whether this process would be done by the IESO during their screening process. Mr. Hill responded that this process would occur between the market participant and Hydro One prior to submission of a capacity export request to the IESO as a sort of pre-screening process, if you will, to ensure that Hydro One is aware of the generator's desire to pursue a capacity export opportunity and that outages can be considered.

Mr. Samant asked who at Hydro One that a market participant interested in exporting capacity should speak to. Mr. Young said the account executive would facilitate the discussion and ensure the right people were involved. Mr. Samant said the process might become onerous for market participants.

Mr. Wu asked why the pre-screening process was not handled by the IESO. Mr. Hill responded that the IESO would not have the required information at the pre-screening stage, since this would include discussions of transmission outage plans. Outages plans are unknown to the IESO until they are actually submitted as outages.







Mr. Young (in reference to slide 5, second bullet – all system operators have the authority to reject or revoke planned transmission outages where they may pose a reliability risk) asked if a capacity export request would be denied due to a previously approved transmission outage. Mr. Hill said the capacity export may be denied, if a combination of outages to the generator and transmission outages rendered the resource unavailable more than 5% of peak hours over the proposed commitment period. Mr. Young asked whether an approved transmission outage would be revoked due to an approved capacity export if the transmission outage resulted in the resource being potentially unavailable for less than 5% of the time. Mr. Hill responded that under the proposed market rule changes, the IESO would have the authority to revoke advanced approval of an outage when a generator is grid incapable and the buying jurisdiction indicated that allowing the outage would render their area capacity inadequate.

Mr. Wilbur indicated that denying CMSC (congestion management settlement credits) for capacity exports seemed unreasonable, and that there was precedent in the past for the IESO to reduce CMSC payments (ramp-down CMSC) rather than eliminate them. Mr. Hill responded that a called capacity export is when the buying jurisdiction has become or anticipates becoming short of energy or operating reserve and now requires the seller to deliver an energy export to their jurisdiction in fulfilment of the participant's obligation under their capacity sale. If the participant bids the called capacity export at \$2000, and if the backing generator is on, the IESO will not cut the exports on the interface to below the called MWs, even if we are load shedding in Ontario.

There are two kinds of CMSC: constrained on and constrained off. Either can occur as a result of the outcome of the DSO, or due to IESO Control Room operator action.

Constrained on CMSC:

- Because a called capacity export is bid at \$2000, there is no circumstance where the
 clearing price would be higher than their bid price, since \$2000 is the maximum market
 clearing price. Because the two prices are the same, there is no CMSC payment as
 CMSC pays for lost operating profit, not lost revenue. Therefore, there can be no
 constrained on CMSC due to DSO scheduling for a called capacity export
- In terms of operator action, the IESO will constrain on a called capacity export when
 Ontario is short of energy or operating reserve in order to reflect the operation of the
 backing generator. This is an administrative, out of market action due to the fact that the
 transaction is a called capacity export, and not a regular trade. As such, it should not be
 eligible for CMSC.

Constrained off CMSC:

 There is a market rule which states that exports which are constrained off in the last predispatch before the start of the hour in which the transaction was to flow, do not receive CMSC. So no CMSC here.





• An issue may arise where an IESO Control Room Operator constrains off a called capacity export in order to manage the grid, such as when needed to respect a limit. For context, this is likely to be a very rare event. First off, capacity calls are rare. The IESO has been doing pilots for about 2 years and have never had a capacity call. It would be even rarer still if the IESO then needed to constrain off exports during a capacity call which were bid at \$2000 to manage the grid. The potential issue appears to be that constraining off a called capacity export is providing a reliability service to Ontario and as such it is arguably unfair to not provide CMSC to a called capacity export, but provide it to other energy exports on the same interface which were bid at the same.

To this last point, the \$2000 bid for this trade represents an administrative price which the market participant is required to bid in order to receive curtailment treatment as a called capacity export as per agreements with other jurisdictions. As such, it does not represent a marginal cost bid, but represents an administrative bid making this transaction more akin to a linked wheel than a normal energy trade. Just like linked wheels do not receive CMSC under the market rules (chapter 9, section 3.5.8), called capacity exports should not receive CMSC, even if they are reduced through IESO Operator action.

Ms. Griffiths mentioned that the transmitter representative has brought up the point that market manual content on transmission outages is not yet available. She mentioned that for previous market rule amendment packages, that it was hard to make determinations on rule amendments without the required details in the market manuals. She added that the market manual issue will be much bigger for the Market Renewal Project. The Chair indicated that market manuals will be one of the areas that will be subject to dialogue going forward.

The Chair said Mr. Bieler had provided his proxy and comment on the proposed amendment, indicating that while Mr. Bieler had some reservations about the benefits of the rule change, Mr. Bieler recognized that it was not the role of the Technical Panel to challenge policy, but rather to ensure the rule language meets the intended design. Mr. Bieler indicated that he is hopeful that when implemented, capacity exports will provide value for generators and Ontario consumers.

The Technical Panel voted unanimously to post the proposed amendment for stakeholder comment for a period of two weeks ending July 12.

Agenda Item 4: DR Enhancements				
Presenter	Samantha Tam, Alexandra Campbell			
Action	Vote on whether to recommend MR-00433-R00-R01 to the IESO Board for consideration at its meeting on August 29, 2018.			





Samantha Tam, IESO reported that the proposed amendment had been posted for two weeks, and received no stakeholder comment. She said the anticipated effective date of May, 2019 for MR-00433-R00 was aligned with the summer delivery period, while MR-00433-R01 was expected to take effect September 21, 2018, subject to IESO Board approval.

Mr. Samant asked whether hourly demand response (HDR) resources were already on the EOSCA (Emergency Operating State Control Actions) list. Ms. Campbell responded that HDR resources were placed on the EOSCA list on May 1, 2018, and that the proposed amendments remove any ambiguity regarding the IESO's authority to place HDR resources on the EOSCA list.

Mr. Lake asked whether the IESO could quantify the expected MW of demand response from the 2017 DR Auction. Mr. Kwok responded that the expected MW quantities, depending on the commitment period, were in the range of 600-700MW.

The Technical Panel voted unanimously to recommend the draft amendments for consideration at the August 29, 2018 Board meeting, with Mr. Bieler voting by proxy.

Ms. Griffiths stated that the demand response community is supportive of making HDR resources available to the system in real time, but has concerns with the standby and activation notices and their deployment. She said the demand response community will work with IESO staff to prepare for the May 1, 2019 effective date of the amendments.

Agenda Item 5: Other Business

There was no other business. The meeting adjourned 10:25 AM.

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	The IESO will allow for time after each TP meeting for in- camera discussions among members.			
December 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	An update will be provided by the end of 2018.			



