

IESO Technical Panel Meeting

Minutes of Meeting

Date held: February 4, 2020		Time held: 9:00 am	Location held: IESO Office, Toronto
Invited/Attended	Sector Representation	Attended; Regrets	
Robert Bieler	Consumer	Attended	
Ron Collins	Energy Related Businesses and Services	Attended	
Rob Coulbeck	Retailers and Wholesalers	Attended	
Dave Forsyth	Consumer	Attended	
Sarah Griffiths	Other Market Participant	Attended	
Robert Lake	Residential Consumer	Attended	
Phil Lasek	Industrial Consumer	Attended	
Robert Reinmuller	Transmitter	Attended	
Sushil Samant	Generator	Attended	
Joe Saunders	Distributor	Attended	
Jessica Savage	IESO	Attended	
Vlad Urukov	Generator	Attended	
Michael Lyle	Chair	Attended	
Observers / Presenters			
David Brown	Ontario Energy Board	Attended	
Vipul Agarwal	IESO	Attended	
Darren Byers	IESO	Attended	
Tom Chapman	IESO	Attended	
Robert Doyle	IESO	Attended	
James Hunter	IESO	Attended	
Jason Kwok	IESO	Attended	
Brennan Louw	IESO	Attended	
David Short	IESO	Attended	

Secretariat		
Jason Grbavac	IESO	Attended
Prepared by: Mitchell Beer / Smarter Shift Inc.		

Agenda Item 1: Introduction and Administration

Chair’s Remarks:

The Chair welcomed participants to the first Technical Panel meeting of 2020.

The agenda was adopted with no revisions on a motion by Joe Saunders.

The minutes were approved with no amendments on a motion by Vlad Urukov.

The Chair introduced Rob Coulbeck as the Technical Panel’s newest member, representing retailers and wholesalers. Mr. Coulbeck gave a brief synopsis of his professional background and underscored the importance of the Panel’s role.

The Chair reported on developments since the Panel’s last meeting, including the Ontario Energy Board ruling that the market rule amendments for Phase 1 of the Transitional Capacity Auction are not unjustly discriminatory. The decision identified three elements for a test of the amendments: There must be evidence of differential treatment; the difference in treatment must be shown to have occurred despite an absence of relevant differences in circumstances; and the economic impact of any differential treatment must be quantified. The Board ruled that differential treatment occurred, but that there was no quantitative evidence for impact.

The Chair reported that the IESO Board approved the Panel’s recommended market rule amendments on out-of-market activations for hourly demand response resources, with some definitional adjustments required to reflect the OEB’s stay of the market rules for the December Transitional Capacity Auction which postponed a capacity auction until June 2020.

He added that 2020 is expected to be a foundational year for the Market Renewal Program’s energy stream, and the IESO will ensure that Technical Panel members have the information and education necessary to carry out their responsibilities as Market Rule amendments begin coming forward in 2021. Educational sessions on different aspects of the energy stream will be included in Panel agendas through the year.

Members were advised that they would soon receive a survey on their experience on the Panel over the last year, and the Chair encouraged everyone to provide their frank and honest feedback.

Agenda Item 2: Engagement Update

Jason Grbavac, IESO, drew members' attention to the prospective Technical Panel agenda in their information packages and summarized the key agenda items for the February, March, and April meetings.

Agenda Item 3: Transmission Rights Clearing Account (TRCA)

Jason Kwok, IESO provided an overview of the developments on the Transmission Rights Clearing Account (TRCA) review since his presentation at the November 27 Technical Panel meeting. He said the IESO factored in the points raised in that discussion, and expects to present draft Market Rule amendments in March, seeking a recommendation to post them for additional stakeholder comment.

In reply to a question from Mr. Saunders, Mr. Kwok said the \$20 million threshold for disbursements was determined by the IESO, with the intention of keeping enough funds in the account to pay out obligations over future periods. With a \$5-million materiality threshold, he explained, the IESO issues no disbursement if the account stands at \$21 million, but distributes \$6 million if the account holds \$26 million.

Mr. Coulbeck asked whether the account has ever fallen below \$20 million in recent history. Mr. Kwok said he would supply that information by the next Technical Panel meeting. Mr. Kwok noted that the TRCA surplus increased from \$34 million in 2009 to \$219 million in 2017, partly because of Ontario's investment in low-marginal-cost resources at a faster rate than its US neighbours, which has generally made its energy prices less expensive than NY or MISO.

Robert Bieler asked why the surplus appeared to have fallen to \$137 million in 2019. Mr. Kwok said that inerties are dynamic and price differences between Ontario and the other markets are the primary driver of congestion rent collected.

Robert Lake asked whether the lower cost of electricity over the last year, on the order of 25% for the average consumer, would have been reflected in the size of the surplus. Mr. Kwok said there would be an impact on Global Adjustment, but not on the commodity cost.

Mr. Kwok recapped the range of views on the proportion of the TRCA surplus disbursement that should be allocated to loads versus exporters. The IESO is aligned with the Brattle Group's recommendation on 100% of the surplus being distributed to loads, originally targeting an implementation date for the change in May 2020. However, based on stakeholder feedback, the IESO has decided to delay the effective date to November 2020.

Mr. Urukov asked how stakeholders were consulted. Mr. Kwok said the engagement was launched within the Market Development Advisory Group (MDAG). There was targeted outreach to trader participants and the meetings were accessible to any/all stakeholders.

Mr. Collins asked about the difference of opinion between the IESO Market Surveillance Panel, which recommended returning 98% of TR proceeds to consumers, and Brattle Group, which called for 100%. Mr. Kwok said the IESO weighed both views in arriving at its recommendation. Mr. Coulbeck asked why staff adopted the Brattle recommendation when the MSP was the driver for undertaking the consultation. Mr. Kwok said while the MSP recommendation was the trigger for the TRCA review, it considered the MSP's perspective as well as other perspectives including The Brattle Group's recommendation when coming to a decision.

Mr. Coulbeck said there was significant feedback from traders that was not reflected in either the 98% or the 100% scenario. Tom Chapman, IESO, said that stakeholders offered a range of input on market efficiency, and on the extent to which the disbursements might provide an incentive for inefficient trading. Mr. Coulbeck reiterated that the participant feedback was not necessarily aligned with Brattle Group's recommendation.

Mr. Urukov asked about the time frame for the engagement and effective date of potential changes. Mr. Kwok said the IESO originally intended the change in process to apply to the May 2020 disbursement date and published that information in mid-October 2019, ahead of the November auction. In reply to a follow-up from Mr. Urukov, he added that one market participant had commented at the December Market Development Advisory Group meeting that he thought the TR market was already pricing in the upcoming changes in disbursement methodology. That comment showed that when the IESO says something it has an impact on the market as market participants are quick to process all available information when making trade decisions.

Mr. Coulbeck said a proposed rule change is just a conversation until it's actually implemented, and market participants can't be expected to factor it into their decisions pro-actively. Mr. Kwok said that view was one factor in the IESO's decision to delay implementation from May to November 2020, to allow more time for the stakeholder engagement and for market participants to factor the information into their planning. A November 2020 effective date would allow the IESO and stakeholders to go through the Technical Panel process ahead of the period to which the disbursement would apply, i.e. in June 2020. By contrast, a May 2020 disbursement would apply to the period beginning December 1, 2019.

Mr. Coulbeck said implementation should be delayed to November 2021, since there are no guarantees until a rule is in place. Mr. Chapman reiterated that a stakeholder had suggested the new rules were already priced in, pointing to prices that cleared much lower than in previous auctions. On that basis, he said the market appeared to be aware of the upcoming change. Mr. Coulbeck said there was still uncertainty.

Mr. Samant said low-cost wind and variable resources will be on the system for 15 to 20 years, and asked whether the IESO had factored in the resulting price differential between Ontario and its two receiving US markets. Mr. Kwok said Ontario was net importing power 15 years ago so it's hard to predict which way the opportunities will be in the future, but acknowledged that in the near-term, Ontario will likely be a net exporter.

Mr. Coulbeck said TRCA distributions are based on what internal loads are paying in transmission charges and exporters pay intertie transmission charges which suggests that the costs of the system are borne by both internal loads and exporters so exporters should receive some share of the TRCA. Mr. Kwok said the IESO acknowledges that usage costs to traders offset the overall cost of the system, but the question of whether exporters contribute to system costs is different than who should receive the surplus funds created by traders out-bidding one another for access to the interties to chase profits.

In response to TP member feedback from the November TP meeting, Mr. Kwok presented an impact analysis on the TRCA methodology change. If all export bids were reduced by \$1/MWh (which was the average value of the TRCA disbursement in recent years), there would be less than 1% reduction in exports scheduled, based on 2018 data.

Mr. Kwok explained that the export interties are usually very congested, and exporters have paid on average intertie congestion of about \$15 in 2018 and \$20 in 2019 over the Ontario energy price. Congestion is valued at \$1 or less only about 2% of the time. If all market participants reduced their bids by \$1, he added, exporters would be able to pay a lower price for the same energy. This would also provide more certainty and transparency to market prices, leading to greater efficiency.

Mr. Urukov asked whether the proposed changes would lead toward a more moderate congestion profile. Mr. Kwok said multiple factors, including weather patterns and the availability of generating units, would determine the price spreads between Ontario and a market like MISO.

Dave Forsyth asked whether a 1% reduction in exports would affect prices. Mr. Kwok said the change would likely result in a lower energy price during the 1% of time. In general, he agreed with Mr. Forsyth that reduced exports would affect energy prices.

Mr. Kwok said the IESO was proposing to proceed with a recommendation to allocate all TRCA surplus disbursements to internal loads on a volumetric basis, on the understanding that exporters see the transmission system as a mechanism to pursue commercial opportunities and would not be exporting if there were no profit opportunities. He added that the proposed November 2020 implementation date balanced differing perspectives, from the MSP calling for an immediate suspension that would in a sense be retroactive, to some market participants asking for more time. He said the IESO is proposing to recommend a vote to post the redlined market rules for stakeholder comment at the Technical Panel's March 3 meeting, with a view to a final Board vote in Q2 that would provide ample market certainty leading into a November 2020 effective date.

Mr. Urukov said he was uneasy with the notion of changing the "rules of the game" in a way that could be premature and unfair to some market participants already with a vested interest or position. Mr. Coulbeck agreed that it doesn't make sense to change rules of engagement in the middle of a period in which market participants have already taken a financial position. Mr.

Kwok said at this point in time, the last outstanding transmission rights currently in place are set to expire on December 31, 2020. Mr. Coulbeck suggested planning for the following 12-month period.

Mr. Bieler suggested May 2021 as the appropriate timing to address an imperfect market situation in which traders are bidding without knowing what their payout might be at the end of a six-month period. If the preference is for a market in which participants bid based on all the facts, he said, earlier timing might be a little aggressive.

In response to a question from Sarah Griffiths on the monetary value of the collections from the transmission rights market, Mr. Kwok said recent collections have been in the range of \$200 million per year, and the amount remitted varies but has averaged about \$1/MWh. He said some market participants say the rebate affects their market behaviour; others say it does not.

Mr. Bieler said the participants suggesting an impact should be in a position to bid based on an understanding of their economic position. Mr. Coulbeck said it should be possible to forecast the surplus and the ensuing TRCA revenue based on the amount of congestion, the volume sold, and the price of the transmission rights that have been sold. Mr. Kwok said transmission rights are intended as a hedge against intertie congestion pricing, and if a trader is using the TR as it's intended, they will receive a smaller TR payout but it would be offset by also paying less for intertie congestion. The greatest impact will fall on speculators that use the TRs to bet on how congested the market could be.

Mr. Saunders asked how a six-month delay would mitigate the concerns expressed by traders who asked for a full year. Mr. Kwok said the IESO was attempting to balance those interests against the perspective of the Market Surveillance Panel, which wanted the change two or three years ago, as well as the implications for loads that should receive more money as a result of the new process. Mr. Bieler asked whether the IESO should allow time for existing commitments and market assumptions to clear out of the market. Mr. Coulbeck said a November implementation date could still be seen as an arbitrary cut-off, and traders should be covered for the whole period rather than being exposed to market risk.

In reply to a question from Ms. Griffiths, Mr. Kwok said missing a November implementation date would mean delaying a full six months to May 2021.

Agenda Item 4: Technical Panel Review – Composition/Process

Robert Doyle, IESO, said the revised Technical Panel Terms of Reference had been posted for stakeholder comment and received none, a response he attributed to the amount of stakeholder engagement that took place in the lead-up to the Advisory Group on Governance and Decision-Making. He noted one change to restore Section 4.4.3 in the latest version, reflecting discussion at Technical Panel in November and subsequently among IESO staff on flexibility within the member nomination process. He said Panel members would be asked to vote on whether to recommend the revised Terms of Reference for approval by the IESO Board.

Mr. Urukov questioned the deletion of the word “formal” concerning an engagement initiative and asked whether the workings of different stakeholder bodies like the Market Development Advisory Group were sufficiently clear. Jessica Savage, IESO, said it sometimes makes sense to utilize existing forums rather than creating new engagement initiatives, as a way of reducing stakeholder fatigue and confusion. That approach is enabled by striking the word “formal” from the Terms of Reference. Mr. Urukov said it will be important for stakeholders to understand that potential market rule amendments are being considered through those existing forums, and the IESO agreed.

Citing the stakeholder process on the Transmission Rights Clearing Account as an example, Mr. Grbavac said the IESO ensures stakeholder participation by emailing affected stakeholders when established bodies like MDAG are addressing issues of concern to them.

Mr. Coulbeck commented that it is impossible to know whether all interested stakeholders have been notified. He said he would attempt to do his part to reach out to his own constituency as a new Technical Panel member, but someone might still be missed.

Ms. Griffiths said she appreciated the IESO’s efforts on this file, adding that the new Terms of Reference are a step in the right direction.

On a motion by Ms. Griffiths, the Technical Panel voted to recommend the amended Terms of Reference for approval by the IESO Board. In lieu of seeking rationales for individual votes on the spot, Mr. Grbavac asked Technical Panel members to send their comments via email by the end of the week.

Re: TP Review – Composition and Process (red-lined terms of reference)

The following is the TP member vote with supporting rationale:

In favour: (unanimous) Robert Bieler, Ron Collins, Rob Coulbeck, David Forsyth, Sarah Griffiths, Robert Lake, Phil Lasek, Robert Reinmuller, Sushil Samant, Joe Saunders, Jessica Savage, Vlad Urukov
Opposed: none

Technical Panel Rationale:

TP Member	Rationale to Support Vote
Bieler, Robert	none
Representing: Consumers	

<p>Collins, Ron</p> <p>Representing: Energy Related Businesses and Services</p>	<p>Regarding the technical panel review process and composition, I recommend the revised red-lined Terms of Reference for IESO Board to consider at its February 26, 2020 meeting.</p> <p>I support the proposed revised Terms of Reference for the following reasons:</p> <p>1) The revisions address the concerns raised by the Advisory Group on IESO Governance and Decision making to avoid duplication with stakeholder review of the market rule amendment and proposal and draft market manual content. 2) The revisions provide additional clarity to the Technical Panel role/advice as well as providing prescribed language for bringing market rule amendments for the Technical Panel consideration and action. 3) The revisions to the Technical Panel composition and membership better reflect current and future market participants who are active in the IESO controlled market.</p>
<p>Coulbeck, Rob</p> <p>Representing: Retailers/Wholesalers</p>	<p>none</p>
<p>Forsyth, David</p> <p>Representing: Market Participant Consumers</p>	<p>I support the proposed changes to the Technical Panel Terms of Reference and believe the Board should approve them. The composition and increased number of core members will ensure reasonable representation of the current stakeholder community on the Panel. The Board can also appoint additional Members to ensure thorough representation of all sectors as the IAM continues to evolve. The timing of these proposed changes is excellent with the multitude of rule changes associated with Market Renewal coming to the Panel soon.</p>
<p>Griffiths, Sarah</p> <p>Representing: Other Market Participants</p>	<p>none</p>
<p>Lake, Robert</p> <p>Representing: Residential Consumers</p>	<p>I support the recommendation to the Board to modify the composition of T.P. for the following reasons:</p> <p>The electricity market in Ontario is changing and will continue to change in significant ways in the not too distant</p>

	<p>future. The Technical Panel, to perform its duties well, will have a need for a larger number of members, with a greater diversity of experiences and skills. For example, there will be increased renewables, increased distributed resources, load management and diverse forms of energy storage. The T.P. will also need to have the flexibility to change the roster of T.P. members whose skills are congruent with changes in the electricity market.</p>
<p>Lasek, Phil</p> <p>Representing: Market Participant Consumers</p>	<p>none</p>
<p>Reinmuller, Robert</p> <p>Representing: Transmitters</p>	<p>This is an appropriate move to balance the participation membership, expertise, decision making responsibility and influence and provide the best recommendations to the IESO Board on broad energy sector issues. The diversity and expertise of the TP will support the board in advancing the most appropriate solutions that create best value for Ontarians.</p>
<p>Samant, Sushil</p> <p>Representing: Market Participant Generators</p>	<p>I voted to recommend for consideration to the IESO Board of Directors the revised Technical Panel Terms of Reference (ToR). My rationale for voting in favour was as follows:</p> <ul style="list-style-type: none"> • I felt the revised ToR adequately incorporates the recommendations of the Advisory Group on IESO Governance and Decision Making • The revised ToR appropriately incorporates feedback from Technical Panel members, the Market Development Advisory Group, and other stakeholders • A draft version of the revised ToR was posted for broader stakeholder review and comment, and • The recommended changes to the ToR including changes to the Technical Panel: <ol style="list-style-type: none"> 1. Composition (including sector representation, member qualifications, membership size, and future member recruitment) and, 2. Processes <p>...will ensure a more effective panel which will be well equipped to operate in an evolving electricity market.</p>

Saunders, Joe Representing: Distributors	As a follow-up to the votes taken at the February 4th Technical Panel meeting, please find attached my voting rationale; I voted "Yes", to recommend to the IESO Board for consideration, the proposed changes to the Technical Panel Terms of Reference. The updated Terms of Reference have been discussed at the June 25, 2019, August 13, 2019, September 24, 2019 and November 27, 2019, TP meetings and has gone through a broader stakeholder review. The updated Terms of Reference also incorporates changes to the composition of the panel which will allow for broader scope of experience to draw upon, on issues brought to the TP.
Savage, Jessica Representing: IESO	none
Urukov, Vlad Representing: Market Participant Generators	none

Agenda Item 5: Capacity Auction – June 2020

David Short, IESO, introduced four proposed market rule amendments for Technical Panel consideration. He said members would be asked to vote on whether to post the material for stakeholder comment, leading toward a March 3 vote on whether to recommend the proposals for approval by the IESO Board.

Mr. Short noted that draft Market Manual revisions had been discussed with Market Participants through the Capacity Auction engagement and provided to Panel members for background, but were not up for review at this meeting. He reiterated the versioning issues that came up due to the transition process from the Demand Response Auction to the Transitional Capacity Auction, and the approach that will be adopted by the IESO to help ensure stakeholders can easily understand the rules that apply to them at any given point in the process. This information will be presented on the IESO's web pages for Market Rules/Manuals and the Capacity Auction.

Mr. Urukov asked how the process addresses overlaps between time periods. Mr. Short said the successive sets of market rules and manuals would remain live on the website until the auctions and obligation periods to which they applied had concluded.

Mr. Urukov asked whether that would mean different numbering systems, with successive sets of auction rules overlaid. James Hunter, IESO, said the website will look largely the way it does now, with a reminder of the versioning issue at the top of the webpage, the point-in-time rule immediately available, and hyperlinks to the versions for each of the auctions in which a stakeholder might be participating. In reply to Mr. Urukov, he confirmed that only the current rules will appear in full on the main page—particularly because other changes in the current rules might also affect a Market Participant, and it's important that those provisions be clear and conspicuous on the page.

Mr. Urukov asked whether all the versions are equally binding. Mr. Hunter said they are, for the auctions to which they each apply. Apart from the Capacity Auction, all the Market Rules will continue to appear on the main library page, and will continue to evolve as they always have. Mr. Short said the approach will result in a clearer and simpler means for auction participants compared to having to read through a single, but complex, ruleset and keep track of all the revisions, and will make enforcement easier for the obligations associated with the Capacity Auction for the same reason.

Mr. Urukov asked whether legal issues might arise over which rules apply if the Technical Panel proposes new provisions that contradict the current set. Mr. Hunter said each set of rules states which auction it applies to, and the website is set up to remind auction participants as to the correct set of rules to follow for the appropriate Capacity Auction.

In reply to a follow-up from Mr. Urukov, Mr. Short said the approach was sent out for stakeholder comment. The response was generally supportive, with some concern that as revisions occur with a set of rules frozen as of the opening of an auction, a stakeholder that some opportunities could be missed until the next rule set for the next auction. He said the IESO does not want to disadvantage auction participants by changing their obligations after the auction has commenced, and has sought to ensure that contractual arrangements remain fixed within an obligation period barring some very large problem with reliability or market issues.

Ms. Griffiths said the IESO's approach mirrors similar initiatives on the part of market operators elsewhere, and expressed confidence that the hyperlinks on the website will function as intended.

Mr. Saunders asked whether any sectors or Market Participants will be placed in an advantageous or disadvantageous position through the transition. Mr. Short said each set of rules will be fixed in time, reiterating that the approach is far simpler and less challenging for Market Participants than trying to embody the complexity across all the versions in a single redlined document.

Mr. Samant asked whether the rule changes will affect earlier stages in an auction process. Mr. Short said early provisions like participant credentials will not be changed too late in the process for Market Participants to react.

Mr. Urukov noted that the amended market manual content introduced provisions on imports, and asked whether importers had been made aware of the stakeholder engagement process for the new material. Mr. Short said the IESO had made contact with traders including but not limited to Manitoba Hydro and Hydro-Québec.

He said the Technical panel would be asked to vote on whether to post the proposals for stakeholder review, ahead of an intended March 3 vote on whether to recommend the proposed amendments to the IESO Board for consideration. With market trials set to begin in March, he said the IESO was hoping for review by a special meeting of the Markets Committee and the Board in March, with final Market Rule amendments taking effect in early May.

Mr. Urukov stated that in Chapter 11, capacity enrolment process is a key qualifier, but is not defined. Mr. Short said the passage previously referred to the IESO's capacity qualification process, but was changed to make it clear that there was no attempt to qualify capacity. He said he believed the language was clear. Mr. Hunter said Market Manual 12 sets out a clear process for participants to let the IESO know how much capacity they intend to offer. He and Mr. Short clarified that, once credentials and deposits are submitted and forms are completed, the provider is enrolled.

Mr. Samant asked whether storage resources must be connected to transmission. Mr. Short said a storage provider must be a Market Participant and must be dispatchable, but it could be an embedded resource.

Mr. Samant asked whether a memorandum of understanding would be required for a capacity import. Mr. Short said the operating structure was still under discussion with Quebec and Manitoba. Mr. Hunter said some form of letter of agreement would be involved; Mr. Short said that agreement would involve the entity supplying the capacity—so the party involved in Quebec would be Hydro-Québec Energy Marketing—and they would have to provide some assurance for how the capacity would be supplied.

Mr. Samant asked whether the agreements would specify that the contracted capacity would flow to Ontario, even if the importer's system was experiencing voltage reductions. Mr. Short said arrangements would follow applicable tariffs for each jurisdiction, based on a central agreement with the actual capacity provider. In response to a follow-up question from Mr. Samant, he said the process for scheduling capacity imports would be defined in the market manuals, with the same kind of testing obligations that would apply to a generator, a dispatchable load, or an hourly demand response resource.

Here Mr. Samant asked whether a unanimous vote would allow the Technical Panel to recommend a proposed amendment to the Board without the posting for stakeholder input

step, based on the Panel's new Terms of Reference. Mr. Doyle said every staff memo on a proposed market rule amendment will include a recommendation that the Panel either post for comment or move immediately to a Board recommendation—but with a unanimous vote, the Panel can send any item directly to the Board.

In this case, Messrs. Short and Doyle said IESO staff made a couple of small, non-material changes to the market rules and manuals for this item subsequent to stakeholder review, and therefore recommended posting the final version for stakeholder review.

On a motion by Mr. Samant, the Technical Panel voted to post the proposed market rule amendments for stakeholder review.

Agenda Item 6: Storage Information

Brennan Louw, IESO, reported that the Energy Storage Design Project began in October 2019 and will eventually result in proposed market rule amendments for the Technical Panel's consideration. The project is aimed at more fully incorporating energy storage into the IESO-Administered Markets as a means of delivering enhanced reliability, competition, and efficiency. The scope of the Storage Design Project is focused on storage connected at the transmission and distribution level and participating directly in the market, not behind the meter or as part of hybrid facilities, and restricted to resources at least one megawatt in size or greater. The project is focused on two time periods, the interim-period (focused on integrating energy storage into today's wholesale markets) and the long-term period (focused on developing a vision for how energy storage will participate in the wholesale markets once the Market Renewal Program is implemented and the IESO is in a position to invest in the tool changes required to fully integrate storage). The interim-period is of greatest interest to the Technical Panel because it will result in draft rule changes this spring, that will be stakeholdered with the Energy Storage Advisory Group and that will likely be brought forward to Technical Panel this summer.

Mr. Samant asked whether the draft rules will require resources to be dispatchable. Mr. Louw said that point will be addressed in the course of the project. The market rules and manuals currently do not have specific language for storage resources. The Storage Design Project will clarify the rules, requirements, and registration options for storage facilities.

In response to a follow-up question from Mr. Samant, Mr. Louw said the issue of uplift charges is of great interest to the storage community, and will be addressed in the course of the project. He added that other charges of interest to the storage community like Global Adjustment are outside the scope of the project, since they do not fall within the IESO's jurisdiction.

Mr. Forsyth asked how much storage capacity is involved. Mr. Louw said there are currently fewer than 50 MW of storage resources directly participating in the market. While those resources have already gone through the registration process, one purpose of the project is to clarify the rules for new resources.

Mr. Lake asked whether the project applies to storage options like pumped hydro and hydrogen. Mr. Louw said the project is taking a technology agnostic approach and is aimed at developing a design that works for a broad set of technologies. He confirmed that the capacity of energy storage on the system is much greater than 50 MW when the Sir Adam Beck Pumped Generation Storage facility is taken into account.).

Mr. Samant asked how the storage project interacts with the IESO's Expanding Participation in Operating Reserve and Energy (EPOR-E) initiative. Mr. Louw said that some of the areas of interest for the storage community that are out of scope for the Storage Design Project – including behind-the-meter storage and hybrid facilities – will begin to be explored this year through the EPOR-E project and that the IESO is working to ensure there is coordination between the two initiatives.

Mr. Reinmuller asked if the purpose of the interim-period is to clarify how existing rules for generators and loads apply to storage resources and, as an example, asked if the rules for storage solutions will parallel the cybersecurity requirements now in place for existing generators. Mr. Louw said he could not speak to the specific example at that time, but agreed that the initial assumption was correct—an important element of the project is to clarify how existing market rules will apply to storage facilities.

Given that existing storage resources are under contract, Mr. Samant asked whether changes in process will provide any unexpected bonus to those legacy providers. Mr. Louw said that isn't expected, but acknowledged the point and agreed it will have to be taken into account.

Mr. Coulbeck noted that storage providers are currently restricted in their ability to provide regulation service as well as energy and operating reserve, resulting in an inefficient opportunity for them to participate. He said that until storage facilities have clearly defined opportunities to compete to provide a range of services including capacity and regulation service, there may be limited uptake of storage in the wholesale markets. Mr. Louw said the interim measures being addressed through the storage design project will provide clarity on current opportunities for storage resources. He also noted that the opportunity for storage resources to compete to provide capacity is being enabled through the capacity auction and that the barrier in relation to regulation service is being addressed through another project at the IESO – the SCADA EMS Upgrade project – and the long-term design work in the Storage Design Project.

Mr. Coulbeck encouraged the IESO to incorporate storage resources in Market Renewal, rather than waiting until after the rules are in place and a whole other process is required to bring them in.

Agenda Item 7: Market Rules and Manuals Framework

Robert Doyle, IESO, reported that IESO staff are close to the end of the implementation process for the 14 recommendations of the Advisory Group on Governance and Decision-Making.

He listed four principles for distinguishing whether content should be included in the Market Rules or the Market Manuals:

- Whether it describes core rights and obligations of market participants and the IESO, as opposed to the processes that support them;
- How or when those rights and core obligations are to be fulfilled;
- Describing process in the Market Rules only to the extent necessary;
- Whether the new material is consistent with the current documents in level of detail and structure.

Mr. Doyle explained that the division of content between market rules and manuals is consistent within individual chapters, noting that Chapter 9 of the rules has an increased level of detail required to guide market settlements, while other chapters are less detailed in their description of obligations. Any new rules should follow that lead.

Mr. Urukov said the approach made sense and asked what it will mean in practical terms. The Chair said the IESO hopes to bring forward a final guideline for consideration by the Markets Committee and the Board at their February meeting. After that, Technical Panel members will have the opportunity to assess implementation and provide feedback. Mr. Urukov asked whether this was simply an extra piece of guidance, to assist staff in deciding whether a particular provision should go in the rules or the manuals. The Chair said the governance review determined that many important items were being placed in the manuals, so it was deemed necessary to seek guidance on the appropriate balance.

Mr. Doyle presented the proposed threshold for deciding whether market manual content should be brought forward to the Panel at an earlier stage in its review process. The two criteria are the significance of economic or operational impacts, and of any changes to market participants' obligations, and if both boxes are checked, he said draft market manual language will be brought forward at the same time as the corresponding market rule amendments.

Mr. Urukov asked whether the trigger should be both criteria, or at least one. Mr. Doyle asked the same question back in turn. Mr. Urukov said one significant impact should be sufficient, and Mr. Doyle said that was consistent with feedback from MDAG. He noted that in an engagement initiative, the IESO would make a recommendation to for the market manuals that would be provided in a red-line form, and others where only a high level description of changes would be provided. Stakeholders would then be able to comment on those recommendations.

Mr. Urukov suggested streamlining the analysis, adding that it should be easier for the IESO to come up with a simple yes or no in each instance. Mr. Doyle acknowledged the feedback, adding that the IESO is committed to greater transparency while not adding additional administrative processes.

Ms. Savage and Mr. Doyle also noted that any market manual revisions that don't meet the threshold for earlier distribution will be available for Panel members' reference, not for their review and comment, per the IESO's existing change management process.

Agenda Item 8: Minor Amendments Omnibus

Darren Byers, IESO, presented the IESO's first minor amendments omnibus since 2017, aimed at catching typographical and grammatical errors and other market rule amendments of a non-material nature. He said the items distributed to Panel members fell into three categories: corrected references to defined terms, corrections to other references, and typographical errors.

On a motion by Mr. Urukov, the Technical Panel voted that the Minor Amendments Omnibus warranted consideration and agreed to post the proposal for stakeholder comment.

Other Business

The meeting adjourned at 11:55 AM.