

Minutes of the IESO Technical Panel Meeting

Meeting date: 19/April/2022

Meeting time: 10:15 a.m.

Meeting location: IESO Office, Toronto and Teleconference

Chair/Sponsor: Michael Lyle

Scribe: Luisa Da Rocha, IESO

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

Invitees	Representing	Attendance Status Attended, Regrets, Teleconference
David Brown	Ontario Energy Board (Observer)	Attended
Jason Chee-Aloy	Renewable Generators	Attended
Ron Collins	Energy Related Businesses & Services	Attended - Teleconference
Rob Coulbeck	Importers/Exporters	Attended - Teleconference
Emma Coyle	Market Participant Generators	Attended
Dave Forsyth	Market Participant Consumers	Attended
Sarah Griffiths	Demand Response	Attended
Jennifer Jayapalan	Energy Storage	Attended
Indra Maharjan	Market Participant Consumers	Attended - Teleconference
Nektarios Papanicolaou	Market Participant Consumers	Attended - Teleconference
Forrest Pengra	Residential Consumers	Attended
Robert Reinmuller	Transmitters	Attended
Joe Saunders	Distributors	Attended - Teleconference
Vlad Urukov	Market Participant Generators	Attended
David Short	IESO	Attended
Michael Lyle	Chair	Attended

Invitees	Representing	Attendance Status Attended, Regrets, Teleconference
Secretariat		
Agatha Pyrka	IESO	Attended
IESO Presenters		
Abbas Zaidi Adam Cumming Dan Alexandru Khaqan Khan Muhammad Bilal Phil Bosco Robert Doyle Vipul Agrawal		

Agenda Item 1: Introduction and Administration

Agatha Pyrka, IESO, welcomed everyone joining the meeting both in-person and conference call.

The Chair welcomed participants to the first in-person Technical Panel meeting since early 2020.

The meeting agenda was approved on a motion by Jennifer Jayapalan.

The minutes of the last meeting were approved on a motion by Jason Chee-Aloy.

The Chair acknowledged Mitchell Beer, Smartershift for providing minute-taking services for the Technical Panel since 2017. He thanked Mitchell for the great output of meeting minutes and wished him all the best. He further indicated that the IESO was in the process of procuring a new note-taking vendor and that IESO staff would prepare the minutes in the interim. Luisa Da Rocha was introduced as the minute taker for today's meeting.

Agenda Item 2: Engagement Update

Ms. Pyrka drew participants' attention to the Prospective Technical Panel Schedule and recapped the upcoming items on the calendar leading up to the June Board meeting. It was noted that Adjustments to Intertie Flow Limits item was moved from April to May as a decision may be available shortly from the Market Assessment and Compliance Division (MACD).

Ms. Pyrka also shared that the IESO engagement update has been posted for April.

Agenda Item 3: Updates to Synchronphasor Monitoring Requirements

Robert Doyle, IESO, recapped that the update for synchronphasor monitoring requirements item was before the Technical Panel for a vote to recommend to the IESO Board of Directors. Stakeholder

feedback was received from Ontario Power Generation which led to two minor grammatical changes since the item was last before Technical Panel.

Additional feedback was received from Technical Panel member Vlad Urukov on two items that were not included in the package of materials. These changes relate to the Chapter 11 definitions for Phasor Measurement Unit and Supervisory Control and Data Acquisition, where the word "or" was incorrectly italicized and it will be un-italicized moving forward. An additional grammatical change noted by Mr. Urukov will be changed in a future package.

There were no questions or comments from Technical Panel members or observers.

On a motion by Sarah Griffiths, the Technical Panel voted to recommend the package of market rule amendments to the IESO Board of Directors.

Agenda Item 4: Enhancements to the 2022 Capacity Auction

Adam Cumming, IESO, recapped the three enhancements being made for the 2022 Capacity Auction: the addition of a capacity qualification process; changing the performance assessment/testing framework to bring in new charges and true-ups; and, expanding the participation model to include generator-backed capacity imports. And renaming the previous capacity import resource to system-backed resource capacity resource. Mr. Cumming indicated that the majority of changes are in the area of the performance assessment modification, including: (1) changing the testing model to allow for self-scheduling where auction resources will be able to schedule their test during a one-week testing period when they are able to best show their ability to meet their capacity obligation – this change was requested by stakeholders; and (2) introducing additional charges for non-compliance and failure to test which will impact qualification for following years, including an augmented availability charge. For this charge, when the system is in need of resources, specifically when there is a chance for an emergency operating state or an emergency operating state has been declared, the availability charge will increase to 10 times the base availability charge (inclusive of the applicable non-performance factor). This charge is also proposed to HDR resources when they are placed on standby. To offset the additional charges, two sets of true-ups are being introduced: (1) if a resource offers in greater than UCAP, some of what would have been lost on the availability charges can be earned back, and (2) a cap on charges so that they can never exceed what the availability payments would have been in an obligation period.

Jennifer Jayapalan asked for additional information on the potential for declaration related to the augmented availability charges as outlined in Market Rule Chapter 9, sections 4.7J.2.1B and 4.7J.2.1C. A definition of the potential for declaration was requested as well as whether it includes the conservative operating state. Ms. Jayapalan drew a linkage between this item and the awareness of system operating conditions item and changing the advisory notices to be discussed later in the agenda. Mr. Cumming, IESO, indicated that the potential for declaration of an emergency operating state does not happen often, but the most common reasons are the emergency energy advisory (EEA) notices. These notices will continue to exist under the new framework proposed in the awareness of system operating conditions agenda item. There is expanded language on this in the Market Manuals. As an example, Mr. Cumming, indicated that the last issuance of this notice was in summer 2020 with an EEA Level 1 that stated there was a potential for the declaration of an emergency operating state where the security threshold hadn't yet been met to go into an emergency operating state, but the notice indicated that conditions were close to that threshold. This notice was sent to all Market Participants and posted on the IESO website. Ms. Jayapalan clarified that the declaration is then a warning specific to that one type of advisory notice for an emergency

operating state and not related to the others being introduced. Mr. Cumming confirmed this was correct.

Ms. Jayapalan followed-up with a scenario where a market participant chose not to submit day-ahead offers and there was no potential for declaration at the time and asked what would happen the next day when there are no offers in the real-time trade day but an emergency is declared? Vipul Agrawal, IESO, indicated that it is independent of whether the resource decided to participate in the day ahead market, as it is based on the EEA conditions; it is not resource specific. Ms. Jayapalan indicated that this would lead to getting the 10 times penalty if the emergency condition was not foreseen. Mr. Agrawal indicated that this requires an understanding of the likelihood of the EEA condition and how this system condition is assessed. The advisory notices are for the shortfall conditions.

Sarah Griffiths asked for the section number for the cap to not owe money to the IESO. Mr. Cumming, IESO, indicated this was part of section 4.7J.7 – the capacity obligation capacity auction charges true-up payment. At the end of the obligation period, the IESO will calculate what the total availability payments would have been, plus all capacity auction related charges, excluding the dispatch charge, and if all the other charges exceed the total payments, the true-payment is made to bring it up to zero. It was also noted that to get to this level, there would need to be extreme non-compliance.

David Forsyth asked, in reference to section 4.7J.7, why the new true-up payment would not be settled on a monthly basis like the Capacity Auction payments and charges, instead of being settled at the end of the period, especially for aggregated resources where there are many portfolio changes during the obligation period. Mr. Cumming, IESO, indicated that the first true-up allows the resource to make up for the availability charges which are accrued on a monthly basis, and the true-up can be earned anytime throughout the entire period. For example, if in the final month, the resource accrued significantly more charges, this could be offset by the true-up. This needs to be able to be calculated for the entire period; it is more for a settlement restriction. Mr. Forsyth indicated that when this was presented to the IESO, it was proposed to be on a monthly basis since portfolios are typically settled monthly. He is not sure how any money can be recovered at the end of the period and noted that it will be difficult to settle on a monthly basis and some may decide to not participate in a month when penalties are incurred. The true-up creates a risk to portfolio managers since it doesn't cap on a monthly basis, but rather on a seasonal basis. Mr. Cumming indicated that by doing this at the end of the period, all of the charges will be known and the total amount of the payment can be calculated with no discrepancies due to a change in a portfolio.

Mr. Forsyth asked if the IESO is still open to addressing the 10 times penalty during the comment period. Mike Risavy, IESO, indicated the IESO was still open to feedback and was intending to host discussions between the April and May Technical Panel meetings. Based on further questions from Ms. Griffith, Mr. Risavy indicated that these meetings have not yet been scheduled and an example has not yet been provided of how the IESO came to the 10 times penalty. Ms. Griffith asked if the IESO has received examples from stakeholders demonstrating the difference between the augmented availability charge impact on HDR resources versus dispatchable loads that do not meet the 200 hours as well as a generator that is subject to a de-rate. Mr. Risavy indicated that the IESO has received some examples and has provided a dispatchable load example in the stakeholder materials.

Ms. Griffith indicated that Panel members are being asked to vote on a set of rules that will potentially change between the April and May meeting votes, where there are potential ongoing discussions, and where no examples have been provided of the financial impact of a 10 times penalty to an HDR resource. Ms. Griffith expressed her discomfort in moving forward when the issue has

been put into a condensed timeline, when a request for transparency was first requested in November, but was not received, and when HDR resources met with the IESO in January to present impacts and ask for an understanding of origin of the 10 times penalty, and it was not until March that the IESO met with the Advanced Energy Management Alliance (AEMA) who with the support of the Association of Major Power Consumers in Ontario (AMPCO) put forward a proposal for a penalty equal to two times the availability charge. Ms. Griffith shared updated figures, to be confirmed following the meeting, to indicate that a 10 times penalty will lead to a \$1.6M impact if a 100MW load was unable to bid in 10MW. In comparison, the de-rate for 200 hours for a dispatchable load is \$400,000, and for a generator is \$129,000. Citing this as a massive discrepancy, Ms. Griffith indicated that all Panel members should see the comparison to understand the impact of the 10 times penalty on different resources and to ensure the design is correct. Mr. Cumming, IESO, clarified that today's item is to post for stakeholder feedback, and if feedback is received that warrants changes to the rules, they will be reviewed.

Ms. Griffith said that this item speaks to the governance discussions that have taken place, indicating that the stakeholder process for this rule change has been the worst case scenario under the new stakeholder rules established by the governance working group and agreed to by the Technical Panel. The materials indicated that work on this item began in the summer when HDR participants were engaged and put forward comments on the initial proposal. However, Ms. Griffith noted that a change happened as a result of a Market Surveillance Panel (MSP) report and the IESO Board's response to it. Ms. Griffith reiterated that the revised proposal was put forward in November, market rules were published in advance of the December 15 due date for comments on the proposal, no action was taken and the IESO indicated that there would be no changes. It was not until March and April that any further revisions to the proposal was put forward.

Ms. Griffith further indicated that this is on top of other issues that have been deprioritized because the financial impact to HDR resources is less compared to the 10 times augmented penalty. These issues include: disagreeing with the process for measuring the baseline and the continuation of an in-day adjustment for resources; moving from an 80 to 90% threshold brought forward in the summer with the IESO promising a proposal, while none was brought forward; no changes being made to the in-day adjustment resulting in a 20% impact on the baseline during the day; and, outstanding audit rules. Ms. Griffith summarized that between the audit, measurement and lack of outage management, HDR resources are not being measured correctly. She stated that these issues have not been resolved and because of how the IESO has stakeholdered the issue, there is now only time to focus on one issue while the other issues have not been settled and continue to cause issues for the sector.

Mr. Forsyth agreed with Ms. Griffith's comments, emphasizing that several elements of the market rule change have not been agreed to by the HDR community and only one is being focused on. It was also noted that the sector was seeing Market Rule change 4.7J.7 for the first time and it is not the six-month true-up sought by the sector when it was verbally presented to the IESO as a monthly true-up. Mr. Forsyth noted that if an aggregator or HDR participant has a bad month, the current true-up will lead to a big payment at the end of the month which is a risk and liability. Mr. Agrawal, IESO, indicated the payments will likely be on a two to three-month timeline, but that this feedback would be taken into account. He noted that there are other advantages and disadvantages to the monthly versus the six-month true-up.

Vlad Urukov summarized that based on the feedback from other Panel members, that the stakeholder process was again being pushed into the beginning of the Technical Panel process, noting that this doesn't make the Technical Panel process efficient and needs to be addressed.

Mr. Urukov asked how the new language in Market Rule 18.1A will work, especially the new wording in section 18.1A.1.1 referring to amendments that exclude the application of 18.1A.1 and 18.1A.2. Mr. Cumming, IESO, explained that much of the language was developed with the Market Renewal Program (MRP) in mind since it will not align with the Capacity Auction schedule, e.g. MRP coming into effect mid obligation period requiring changes to allow auction participants to continue meeting their obligations in the new markets. When the IESO proposes an amendment pursuant to this section, a statement will include that there is an impact on the Capacity Auction related market rules.

Mr. Urukov asked if every clause will need to have this reference. Mr. Cumming confirmed that this is the case. Mr. Urukov further asked how many rules will need to be changed. Mr. Agrawal, IESO, said that this will need to be checked with MRP. Mr. Urukov suggested that there will be lots of rules and it will be a challenge as the language in the amendment is quite raw. Mr. Agrawal, IESO, noted that having this provision explicitly called out during the MRP engagement, Capacity Auction participants should know that they should be reviewing the rules to ensure they are continuing to meet their obligations and that they can raise any concerns with the application of the clause through the market rule amendment process.

Mr. Urukov suggested for Market Rule 18.3.1 that the word "full" be moved from the last sentence to the first sentence and that the last sentence be deleted as it is redundant. Mr. Agrawal, IESO, agreed to review the proposed change.

Mr. Forsyth asked about the changes anticipated in relation to Market Rule section 18.1A. Mr. Cumming, IESO, responded that the biggest change is moving to a single schedule market and the introduction of the day-ahead market (DAM), notably how energy bids and offers will be made under the new market. Mr. Forsyth noted that loads are concerned with the minimum bid of \$100, indicating that loads will have problems if they are forced to pay \$100 in the day-ahead market. Mr. Agrawal, IESO, noted that the change is administrative in scope and it is not meant to change the underlying obligation.

Observer Paul Lukkonen expressed concerns about the stakeholdering completed for the Capacity Auction, particularly with regards to the 10 times availability charge. Mr. Lukkonen thanked Ms. Griffith for reviewing the procedural issues and history on the timeline and process for receiving comments. Referring to slide 20 from the March Technical Panel Capacity Auction presentation, Mr. Lukkonen said that it indicates that the IESO continues to stakeholder the implementation details of the charge, yet noted that the Capacity Auction was not discussed at the March or April engagement meetings. Mr. Lukkonen indicated that a system emergency alert is not the same reliability concern as a standby availability operating condition and this does not seem to be adequately captured by the IESO and does not fit into the UCAP calculation, suggesting that it warrants consideration that UCAP is not appropriate for HDR. Mr. Lukkonen noted that it is very important that the IESO has not presented any proposals from the existing rules, indicating that the IESO needs to show how the 10 times charges are appropriate. Mr. Risavy, IESO, noted that it is correct that UCAP is not applicable to HDR resources. The IESO continues to receive feedback on the level of augmented availability charges and will endeavour to provide an example. Mr. Agrawal, IESO, noted there are two sets of charges – the augmented availability charge applicable to EEA declarations, and the standby availability charge being proposed in lieu of having a UCAP for HDRs, which is consistent with what was proposed previously. Comments on the magnitude of the charge are the final implementation detail being stakeholdered with relevant groups.

Ms. Griffith asked for clarification on whether the true-up excludes the dispatch charge and includes the augmented availability charge and the new standby charge. Mr. Agrawal, IESO, noted this is

correct, that it includes all of the capacity related charges, all capped against the total capacity availability payments.

Mr. Forsyth asked whether a generator on an approved outage will be subject to the 10 times charge in an emergency event. Mr. Agrawal, IESO, indicated yes, as there is no outage consideration given to a generator. Mr. Forsyth concluded that all resources are treated the same in this situation and Mr. Agrawal agreed.

Emma Coyle noted that generators are in a period of shortage, with outages subject to IESO approval, as are loads. Given this, Ms. Coyle asked about the purpose of the penalties and whether a generator is supposed to appeal to the IESO for allowing it to take an outage during that time. Mr. Agrawal, IESO, indicated that this is the role of the true up, as the generator will be able to true-up cleared back the availability charges as part of the settlement exercise. It is understood that generators will be taking outages and allowances will be made for this through the true-up. Mr. Cumming, IESO, added that if a generator operates more than UCAP, the additional true-up payment will be in addition to this. For example, for a 100 MW generator, with a 10% outage rate, the UCAP will be 90, but if 100 MW is offered, they will get the true-up for MW over UCAP. Ms. Coyle asked about the link between the rules that are supposed to drive efficient behaviour with the IESO approving generator outages and potentially requesting that they be moved. Mr. Agrawal noted that there is no active monitoring if a generator is on a planned outage against the availability assessments. The generator will have the ability to earn a true-up based on MW offered in excess of its UCAP. Jason Chee-Aloy asked how this was handled in other jurisdictions. Mr. Agrawal noted that it was the same.

Ms. Coyle noted that it is critical that stakeholder engagement on the design be completed before the rules are presented. Mr. Agrawal, IESO agreed and noted that the intent was to help in understanding the design which speaks to the 'why', while the market rules and market manuals cover the 'how'. It was not intended to be the final set of rules and manuals.

Ms. Griffith said that the UCAP discussions correctly began in July, however noted that the HDR engagement timing has been disappointing because it was known that it would take this long, yet it was brought in at the last minute, further indicating that any change in magnitude for HDR should have been started in the spring and then continued into summer for the market rules to be introduced in a timely manner. This would have followed the same timeline as the other Capacity Auction enhancements that have been outlined well throughout the process. As a result of the condensed timeline, and the fact that the engagement was not done properly, Ms. Griffith noted that the change should not happen until the December 2023 Auction.

Ms. Jayapalan highlighted that the problem is that the Technical Panel is being asked to vote for broader stakeholder comment, yet the stakeholdering isn't finished, noting that this places the Panel in a challenging position because a lot has yet to be settled, yet the members are being asked to put their names behind it. Mr. Risavy, IESO, clarified that the stakeholdering for the design has been completed, and the outstanding items are implementation related. Ms. Griffith disagreed that the design has been settled, indicating that there are still outstanding items that were introduced late in the process. Mr. Agrawal, IESO, noted that from an engagement perspective, the foundation for the enhancements or the design has been completed, versus a few implementation details which are still outstanding. Ms. Griffith indicated that the HDR sector disagrees with the design, noting that the design is not meeting its intent. They also disagree with using availability as the key for HDR resources as this doesn't drive the desired behaviour. Even without the 10 times availability charge, the HDR sector disagrees with the design and implementation. This feedback has been shared since the fall and put forward in meetings. Mr. Agrawal asked whether the HDR community feels that they

should not be subject to an availability de-rate. Ms. Griffith responded that they do not agree with how the IESO is going about the availability de-rate and have put forward other options.

Mr. Forsyth noted that there has been an adversarial relationship on this topic and feels that the IESO has not put in enough effort to resolve this. Mr. Risavy, IESO, disagreed. Ms. Griffith noted that there has been a change in tone since March and a good discussion was held last week.

Rob Reinmuller summarized that the design is complete, implementation is ongoing and the Panel is about to ask a wider stakeholder audience for a convergence on the materials, whereas the Panel is not converged on some items. Mr. Reinmuller indicated that there is value to stakeholdering if the Panel can re-convene to review the stakeholder input to see what is acceptable and then determine next steps. Conversely, going straight to the Board next would be premature and rushed. Mr. Reinmuller concluded that the Panel needs to review the stakeholder feedback before going to the Board, otherwise due diligence has not been done.

Following a short recess called by the Chair, the Chair resumed the meeting noting that there were useful discussions with key stakeholders last week, and that additional discussions will be scheduled shortly, but hadn't yet been due to the extra-long weekend. The Chair expressed a desire to determine the Technical Panel members comfort level on vote to post for stakeholder feedback given the discussions before the recess.

Ms. Griffith felt comfortable to post for comment, despite the issues, as this is another opportunity for participants and stakeholders to be heard.

Ms. Coyle advised that she would vote to post for comment, but requested that the vote to recommend be moved beyond the next Technical Panel meeting. The Chair noted that this could be taken into consideration depending on how the discussions proceed.

Mr. Urukov agreed with Ms. Coyle's proposal with posting for stakeholder comment as long as the documentation can be provided sooner prior to Technical Panel meeting. The Chair noted that while this is a significant issue for some stakeholders, it is a discrete one and the majority of the package is not impacted by this issue.

Mr. Reinmuller supported recommending the vote to post with a pause afterwards to discuss stakeholder feedback prior to sending the item to the Board.

Mr. Forsyth supported posting for feedback, but indicated that it is urgent to have this dialogue.

Mr. Urukov indicated that the language in Market Rules section 4.7J.7 – Capacity Obligation Capacity Auction Charges True-Up Payment is lacking clarity on how it will be calculated, comparing it to the language in section 4.7J.6 which is explicit as to the amount and when it will apply. Mr. Cumming, IESO indicated that the language explains how it will be calculated as it is the combination of the availability payment for all six months of the obligation period plus the availability true-up minus all the other charge types noted in section 4.7J.2, excluding the dispatch charge. If the number is negative, the true-up payment will be applicable bringing the payment to zero. Mr. Urukov indicated that the language could be clearer and could match the clarity provided in 4.7J.6. Mr Cumming indicated that this would be reviewed.

On a motion by Indra Maharjan, the Technical Panel voted to post the package of market rule amendments for broader stakeholder comment.

Agenda Item 5: Replacement of the IESO Settlement System

Dan Alexandru recapped the item by indicating that market rule amendments are required to enable the implementation of the Replacement Settlement System (RSS) Project and reviewed the key project objectives. The IESO launched a stakeholder engagement in Q2 2020, had additional conversations with various market participants, provided implementation details at the stakeholder engagement and is continuing to set the implementation timeline.

Mr. Urukov said that the Market Renewal Project (MRP) was not listed among the objectives for the project and asked if this project was separate from MRP. Abbas Zaidi, IESO, indicated that the new system will make the implementation of MRP easier, but there is no real dependency with MRP. The project will replace the current system and bring in new efficiencies which will assist in implementing MRP and other future changes.

Mr. Urukov noted that the response to stakeholder feedback was posted on Thursday leaving little time for review prior the Technical Panel meeting. It was also noted that the number of proposed changes is significant, that it is a substantive change to the settlement process and the appropriate importance needs to be placed on this. Mr. Urukov further noted that there are changes that appear to be outside the scope of the listed project objectives.

Mr. Urukov pointed to a reference in Market Rule 2.5.1A.4G to a relevant settlement statement, asking what defines relevancy when there are now three types of settlement statements. Mr. Zaidi, IESO, indicated that relevancy refers to all of the statement types.

Mr. Urukov asked for an example as to when Market Rule 2.5.1B subsection (b) would be an earlier date than subsection (a) since settlement will always take precedence over invoicing. Mr. Zaidi, IESO, said that this is meant to cover scenarios where the specific transaction was not settled on the previous statement, with the intent to address any scenario that may arise. Based on a request by Mr. Urukov for a more specific example, Mr. Zaidi indicated that this will be taken back for review.

Mr. Urukov asked about Market Rule 2.7.27A where there is a reference to a 24-month limitation period which indicates that as part of the arbitration period, the arbitration outcome shall not order the IESO to take action. It was noted that if the rules already include that a participant will not be able to bring forward a matter during that window, under what circumstance would there be an arbitration outcome that would need to be prohibited under this section. Mr. Zaidi, IESO, said that this is meant to be comprehensive, but confirmed that Mr. Urukov was correct and indicated that this will be taken back for review.

Mr. Urukov asked about the additional language in Market Rule Chapter 6 section 7.1.4 that imposes an additional obligation on new testing, indicating that it seems instead like an audit finding change driven by the IESO's auditing process. Mr. Urukov highlighted this clause as an example of his earlier comment that changes have been made throughout the market rule amendments that are outside of the objectives for the change. Mr. Reinmuller expressed similar concerns, referencing section 7.1.4.2 and asking if stakeholders provided feedback on whether this was a reasonable timeline from a market participant perspective, not an IESO perspective. Mr. Urukov asked whether this was the first time market participants are seeing this clause and whether there was sufficient time for feedback before proceeding for approval. Mr. Urukov reinforced Mr. Reinmuller's comment that the two-day timeline is very aggressive, contrasting it with other clauses that provide the IESO with timelines of 'as soon as reasonably practical', further noting that it would not sit well with market participants. Phil Bosco, IESO, noted that the 18-month timeline has been part of the stakeholder discussions and the IESO has not received any feedback with respect to reasonableness given that the intent is to fit

this into the limitation period. Mr. Bosco indicated that the feedback on the audit clause and the timing in section 7.1.4.2 will be taken back for review.

Mr. Urukov noted that Market Rule Chapter 6 sections 10.4.4.2(b) and 10.4.5 are contradictory because the first indicates that the IESO can make changes on the recalculated settlement statement, and the second indicates that the IESO cannot make a determination before issuing 'any' settlement statement. Mr. Zaidi, IESO, said that the provisions state that the corrections will eventually be made on a recalculated settlement statement, but until such time as the correction is made, the IESO will continue to issue any other statements that would have normally been scheduled. Mr. Urukov noted that the word 'any' in section 10.5.4 is misleading. Mr. Zaidi indicated that this would be taken back for review.

Mr. Urukov, in reference to Market Rule 10.4.6, asked what is meant by "a former metered market participant". Mr. Zaidi, IESO clarified that this refers to participants that have withdrawn from the market, where the IESO has no way of collecting from them and therefore would need to recover from the market at large. Mr. Urukov said that this needs to be clearer. Mr. Zaidi indicated that this would be taken back for review.

Mr. Urukov, in reference to Market Rule 1.3.2.3, noted that identifying a metering issue in two days is not a reasonable timeline and suggested that it be reconsidered. Mr. Zaidi, IESO, clarified that this was a notification period after the metering issue was discovered and indicated that this would be taken back for review.

Mr. Urukov asked for clarity on the timing change in Market Rule 1.4 where the instrument transformer checks changed from six years to 18 months. Mr. Zaidi, IESO, noted that the intention of this addition is to have participants complete at least one check within 18 months of the new timelines becoming active in November 2022, and further explained that the IESO does not want, after May 1, 2024, participants to go back more than 18 months for any correction. It was further noted that when a participant completes the check between November 2022 and May 2024, it should cover the period of time elapsed since the previous check (up to a maximum of six years) and all subsequent checks will cover a time period of 18 months. Mr. Urukov asked if this requirement is for every 18-month period. Mr. Zaidi indicated that the checks need to be done every 18 months to ensure that disagreements can be addressed, and if required, a dispute can be initiated prior to the expiration of the 2-year limitation period.

Mr. Urukov expressed reservations with the introduction of the new settlement statement, more specifically on the potential overlap between the notices of disagreement and notices of dispute. Mr. Urukov asked if there is an example as to when each period starts and ends, and how overlaps will be avoided, adding that at the moment, this process is clear and works well. Mr. Zaidi, IESO, noted that the distinction between the two will remain and the IESO will be looking for participants to review their statement and flag any issues through a notice of disagreement, as a first way of notifying the IESO. The change is in reference to the final recalculated statement where the IESO is not permitting a notice of disagreement, noting that these statements are issued 23 months after the trade date was first invoiced and items cannot be subject to a notice of disagreement, but rather the participant would proceed straight to a dispute. This is the only case where items would proceed straight to dispute without a notice of disagreement. The provision still remains that a participant can trigger a dispute when it disagrees with the IESO's decision on a notice of disagreement. Mr. Alexandru, IESO, added that the concept is that the participant will still submit any issues with the preliminary statements as a notice of disagreement, but if there is an issue on the final, then this would go directly to a notice of dispute. Mr. Urukov suggested that a flowchart would be helpful since the change is adding complexity to the existing process. Mr. Alexandru noted that the IESO will

create an example that takes participants through the full settlement cycle and Mr. Zaidi noted that this will be augmented with examples.

On a motion by Jennifer Jayapalan, the Technical Panel voted to post the package of Market Rule Amendments for broader stakeholder comment.

Agenda Item 6: Improving Awareness of System Operating Conditions

Mr. Cumming, IESO recapped the two components of this item: (1) introducing a new grid operating state – the conservative operating state, and (2) changing the IESO’s advisory notice framework to have three types of advisory notices – alert, warning and action.

Mr. Reinmuller asked how market participants will know how the states are entered and exited, indicating that this will help participants know when they will resume normal operating conditions. Mr. Cumming, IESO, noted that information will be added to the Market Manuals on the triggers for the conservative operating state, similar to the tables currently available for the triggers for an emergency and a high risk operating state. It was also noted that notifications are sent out.

Mr. Urukov noted that there is a lot of quantifiable information on how to enter the high risk state and asked if it is possible to provide similar numerical bounds for the conservative state. Muhammad Bilal, IESO, noted that there will be similar criteria applicable to conservative operating state, noting that this new operating state will add another layer to let participants know that the system is no longer in a normal operating state. Mr. Urukov indicated that he is asking this in the context of Market Manual 2.3.2 where the IESO may act in a number of ‘any’ of the listed conditions, asking what this means, and further noting that the interpretation of extreme heat is conservative. Mr. Reinmuller added that another motivation to add more specificity is that asset owners need to start preparing for hotter climates. For example, if the IESO says that extreme weather is 40 degrees for a week, then generators will have more information to plan their operations to meet these requirements, further noting that any leading data that can be added will be beneficial (i.e. not going below minus 30 degrees for the next two weeks) even if it is an example. Mr. Urukov suggested that the Market Manuals need to be specific, otherwise it doesn’t give participants a lot of knowledge.

David Short, IESO, asked IESO staff how this clarity can be provided compared to what is done today and whether the notices will provide additional information. Mr. Bilal, IESO, indicated that before going into a conservative state, the IESO will still follow the existing procedures which include issuing an extreme conditions alert and providing notification to participants. The only difference is that today the IESO is still in the normal operating state when these actions are taken, whereas with the proposed changes, the actions will take place in a conservative operating state while taking the same actions. It was emphasized that the actions do not change, only the operating state will change. In terms of providing advanced warning, the advisories will be issued in the day-ahead time frame, noting that this already happens today and will continue in the future. Mr. Short asked Mr. Urukov if he was looking for something that is clearer months in advance or just clearer notification. Mr. Urukov clarified that his request is that the level of precision and quantification currently provided in the Market Manual for the high risk state, also be provided for the new conservative state. Mr. Bilal indicated that this will be taken back for review.

Mr. Chee-Aloy noted that there have been no material changes to the control action list in the Market Manual because this is part of the conservative state that takes place just before the emergency state, concluding that the change relates more to the notice. Given this, it was asked if there are situations in the conservative state where the IESO would have to issue a direct notice to a participant, or if this action is part of the emergency state. Mr. Bilal indicated that this would be part

of the emergency state. Mr. Chee-Aloy further noted that Market Rule amendment 5.9A.3 indicates that under the conservative operating state, the IESO can direct market participants to suspend all non-urgent maintenance and switching activities, however there are no corresponding material changes in the Market Manual areas of outage coordination and management, and asked for clarification on what actions participants need to take as part of the outage process. Mr. Cumming, IESO, noted that the outage process will remain unchanged, however the authority will be expanded to the conservative operating state, noting that this is included in section 6.4.9.1.

On a motion by Robert Reinmuller, the Technical Panel voted to post the package of market rule amendments for broader stakeholder comment.

Other Business

There was no other business.

The meeting adjourned at 12:40 p.m. The next meeting will be held on May 17.

Action Item Summary

Date	Action	Status	Comments
February 15, 2022	Technical Panel members asked for a MACD review of if the MR-00468 proposed market rule amendments met the intent of the design.	Open	A letter from the Technical Panel Chair is posted to the Technical Panel webpage.
February 15, 2022	In relation to MR-00472 – Replacement of the IESO Settlement System, the IESO will provide rationale as to why a 23-month review period, rather than two years was specified.	Closed	Update provided during April 2022 TP meeting.
March 23, 2021	In relation to MR-0448-R00 market rule amendments, the IESO will periodically review the availability of error and omissions insurance for negligence.	Open	Update provided during November 2021 TP meeting.