



Jessica Tang
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October 15, 2021

Dear Jessica,

This submission responds to the Independent Electricity System Operator's (IESO's) draft amendments to the IESO Market Rules and Market Manuals regarding the Market Power Mitigation (MPM) batch (i.e., MR-00455, MR-00461-R01, Market Manual (MM) 14.1, MM 14.2, MM 1.3, and MM 1.5) that was released on August 12, 2021 as part of the implementation of the Market Renewal Program (MRP).¹

Power Advisory has coordinated this submission on behalf of a consortium of renewable generators, energy storage providers, and the Canadian Renewable Energy Association (the "Consortium"²).

This submission is organized by the following sections:

- General comments;
- Comments on draft amendments to Market Rules; and
- Comments on the draft amendments to Market Manuals.

The Consortium understands that this is the first round of comments and understands that additional rounds will be provided for further comments from market participants (MPs) and stakeholders. Therefore, the comments within this submission should be taken as preliminary. Throughout the process to amend the Market Rules and Market Manuals relating to the MPM framework, the Consortium may necessarily evolve its positions regarding the amendments proposed by IESO on August 12 and any subsequent proposed amendments.

¹ See <https://www.ieso.ca/en/Market-Renewal/Stakeholder-Engagements/Implementation-Engagement-Market-Rules-and-Market-Manuals>

²The members of the Consortium are: Canadian Renewable Energy Association; Axiom Infrastructure; BluEarth Renewables; Boralex; Capstone Infrastructure; Cordelio Power; EDF Renewables; EDP Renewables; Enbridge; ENGIE; Evolgen (by Brookfield Renewable); H2O Power; Kruger Energy; Liberty Power; Longyuan; NextEra Energy Canada; Pattern Energy; Suncor; and wpd Canada.



GENERAL COMMENTS

The following five areas capture the Consortium's general comments after review of the proposed rule and manual amendments relating to the MPM framework.

Consistency and Continuity from Detailed Design to Draft Amendments to Market Rules and Market Manuals

There appears to be key areas within the *Market Power Mitigation Detailed Design Issue 2.0*³ (i.e., "MPM Detailed Design") that have not been included within MR-00455 or the applicable Market Manuals. For example, the methodology for IESO to determine Broad Constrained Areas and its application within IESO's assessment whether an MP has exercised market power is not included within either the amendments to Market Rules or Market Manuals. Considering that the application of IESO utilizing Broad Constrained Areas within assessment of the exercise of market power is an IESO obligation, the Consortium believes this aspect of the MPM framework should be included within MR-00455.

The Consortium was of the initial opinion that Broad Constrained Areas had been dropped from the MPM framework because it was not included within MR-00455 or MM 14.1; however, we had learned that Broad Constrained Areas are still part of the MPM framework upon posing a question to IESO during the August 26, 2021 webinar and received confirmation that Broad Constrained Areas are still part of the MPM framework.

This point raises concern that there are potentially other important aspects of the MPM Detailed Design that will be utilized within the MPM framework and may not be included within MR-00455, MM 14.1, or MM 14.2.

Overall, this point speaks to an overarching process point – how will IESO inform MPs and stakeholders when components within MPM Detailed Design are changed, will IESO release subsequent Issues of the MPM Detailed Design, and how will IESO inform MPs and stakeholders on other components within the MPM Detailed Design that have not been explicitly included within MR-00455, MM 14.1, and MM 14.2? The Consortium recommends this process question be discussed with MPs and stakeholders, including the Technical Panel (TP).

Inconsistent Details and Lack of Clarity in Draft Amendments to Market Rules and Market Manuals

The Consortium acknowledges challenges to achieve a clear and workable balance between listing MP and IESO obligations within the Market Rules and other important points combined with sufficient level of details regarding these obligations and points. This balance also drives the details and information to be included within Market Manuals.

³ See Market Power Mitigation dated January 18, 2021, located at <https://www.ieso.ca/en/Market-Renewal/Stakeholder-Engagements/Energy-Detailed-Design-Engagement>



However, there are some areas within the draft amendments to the Market Rules that may better be placed within Market Manuals and vice versa. For example, the physical withholding rule amendments are very detailed while the rule amendments regarding determination and application of Constrained Areas are not very detailed. Similarly in other areas within amendments to rules and manuals, the Consortium believes that some details regarding physical withholding (e.g., threshold percentages, threshold prices, etc.) should be placed within Market Manuals (i.e., similarly to actual offer price floor amounts applicable to variable generators).

There are some areas within the draft amendment to the Market Rules that require clarification (even after reviewing corresponding sections from the MPM Detailed Design). For example, the Market Control Entities concept and application relating to registration data and information and its application towards determining whether physical withholding was exercised requires more clarity and justification.

Insufficient Details in Draft Market Rules and Market Manuals

As mentioned within the sub-section above, the methodology to determine Constrained Areas and their application requires more clarity within the Market Rules but requires more details within MM 14.1.

The methodology IESO will use to establish Constrained Areas is extremely important because the Conduct & Impact Test will not be applied by IESO unless an MP's resource(s) is located within a Constrained Area (e.g., Narrow Constrained Area, Dynamic Constrained Area, etc.). Therefore, more details are required regarding the methodology IESO will use to determine Constrained Areas and their application within the MPM framework (i.e., engineering equations to determine Constrained Areas).

Needed Reforms to Governance, Decision-Making, and MP Recourse Within IAM

MPs and stakeholders have been calling for reforms to the governance, decision-making, and MP recourse within the IESO-Administered Markets (IAM) for multiple years. Because of issues raised, IESO created the Governance and Decision-Making Working Group⁴ to provide advice on this matter. While IESO made positive changes based on this Working Group's deliberations, more work and changes are required to bring IAM up to par with other wholesale electricity markets in Canada and the U.S. For example, all amendment to the market rules in Alberta are brought forward for open stakeholder proceedings and decisions by Alberta's electricity regulator (i.e., Alberta Utilities Commission), and same for all amendments to market rules within NYISO, ISO-NE, PJM, MISO, SPP, and CAISO where the U.S. Federal Energy Regulatory Commission (FERC) holds open stakeholder proceedings towards FERC decisions. Simply put, the same level of governance, decision-making, and MP recourse framework does not exist within IAM.

⁴ See <https://www.ieso.ca/en/Sector-Participants/Engagement-Initiatives/Engagements/Completed/IESO-Governance-and-Decision-Making>



The Consortium acknowledges the positive step of IESO creating an Independent Review within the MPM framework regarding establishment of facility-specific Reference Levels and Reference Quantities. However, this Independent Review is not applicable to other aspects of the MPM framework or more broadly across IAM.

Improve Alignment of Stakeholder Engagement Process and Feedback Timelines

During TP's October 5, 2021 meeting, an initial discussion was held regarding the MPM framework and its draft rule and manual amendments. While additional discussions will be held at future TP meetings, TP would have had a more meaningful and insightful discussion if the initial discussion was held after IESO, TP, and all MPs and stakeholders would have had the opportunity to review MP and stakeholder comments on MR-00455, MR-00461-R01, MM 14.1, MM 14.2, MM 1.3, and MM 1.5 (as comments on these draft amendments to Market Rules and Market Manuals are due to IESO by October 15, 2021).

Therefore, the Consortium recommends that IESO review timelines for receiving comments from MPs and stakeholders, to enable TP members to have further insights prior to having discussions regarding IESO proposed and draft amendments to MRP related amendments to Market Rules and Market Manuals.

COMMENTS ON DRAFT AMENDMENTS TO MARKET RULES

MR-00455 – Market Renewal Program: Market Power Mitigation

Chapter 7, Section 22 – Market Power Mitigation

- Section 22.1.1 – shouldn't MPs have the obligation to register Reference Levels for their facilities and not IESO with the obligation to register Reference Levels?
- Sections 22.1.1 and 22.1.2 – IESO determination and registration of Reference Levels suggests that IESO has final decision-making authority, but Reference Levels (and Reference Quantities) could be determined by the Independent Review; therefore, these sections require cross references to Independent Review decisions and MPs' rights under the dispute framework in Chapter 3 in the event of disagreements with IESO or the Independent Review
- Section 22.1.8 – IESO needs to provide further explanation and rationale why "A dispatchable resource installed pursuant to the Canadian Nuclear Safety Commission's requirement for nuclear power plants to maintain standby and emergency power systems is exempt from the requirements in, and market power mitigation framework established by, this section 22." – does this exempt all nuclear generators from IESO assessment of potential economic withholding? If so, why?
- Section 22.3.1 – same comment as above (Sections 22.1.1 and 22.1.2)

- Section 22.3.2 – IESO needs to provide explanation and rationale for the listed default Non-Financial Dispatch Data parameters; further, are parameters better placed within the applicable Market Manual?
- Sections 22.5.1, 22.5.2, 22.5.9, and 22.5.10 – same comment as above (Section 22.1.2) regarding IESO with final decision-making authority
- Sections 22.6.1 and 22.6.2 – same comments as above (Sections 22.1.1 and 22.1.2)
- Sections 22.7.1 and 22.7.2 – same comments as above (Section 22.1.2)
- Section 22.8.3 – if no consultant responds to IESO’s Request for Proposals (RFP), it is not satisfactory for IESO to then be able to finalize Reference Levels and Reference Quantities and then to register these Reference Levels or Reference Quantities – there needs to be a way to initiate the Independent Review or some alternative satisfactory process
- Section 22.8.8 – this appears to be one-sided in favor of IESO regarding acceptance of the Independent Review findings and is not fair to the applicable MP, cross references should be made to the dispute framework in Chapter 3 where MPs do not agree with outcomes resulting from the Independent Review
- Sections 22.9 – overall the Market Control Entities framework is complicated and confusing, and it is not clear why IESO requires detailed corporate ownership information; therefore, IESO needs to explain the requirements and rationale within these proposed draft rule amendments
- Section 22.10 – Broad Constrained Areas (BCAs) should be included in this section, similarly as Narrow Constrained Areas (NCAs) and Dynamic Constrained Areas (DCAs) have been included
- Section 22.10.1.2 – IESO should publish Potential Constrained Areas (PCAs) on their website, at least on an annual basis – during the August 26, 2021 IESO MPM webinar presentation, IESO staff stated both that PCAs will, and will not, be made publicly available
- Section 22.10.2.1 – IESO needs to provide rationale regarding the listed NCA thresholds; further, such thresholds may be better placed within the applicable Market Manual
- Section 22.10.2.3 – IESO needs to better describe what constitutes “material configuration changes” regarding their ability to update the list of resources located within NCAs
- Sections 22.10.3.1 and 22.10.3.3 – regarding DCAs, same comment as above regarding threshold levels (Section 22.10.2.1)
- Section 22.10.3.4 – RTM is italicized but it is not included within Chapter 11 (Definitions) of the Market Rules nor included within MR-00461-R01 – this re-occurs throughout multiple sections within MR-00455

- Section 22.11 – regarding Global Market Power Reference Intertie Zones, there is a fundamental flaw within the MPM framework by not including assessment and potential mitigation of imports at Ontario interties connecting to jurisdictions that do not administer wholesale electricity markets (e.g., Quebec, Manitoba) – this point had been raised during stakeholder engagements relating to MRP High-Level Design, yet IESO did not provide satisfactory answers for such omission of imports at these interties; for example, the following proposed draft rule amendments makes this point because such results have occurred within IAM at Quebec and Manitoba interties within pre-dispatch and the real-time energy market:
 - Section 22.12.1.1 – a single market participant received at least ninety percent of the day-ahead market scheduled energy withdrawals or injections over boundary entity resources connected to that intertie zone scheduled in the DAM in the previous calendar quarter; or
 - Section 22.1.2.1.2 – the IESO reasonably determines that effective competition in that intertie zone is or is expected to be restricted
- Section 22.13.1 – this section states MPs submitting Non-Financial Dispatch Data, yet Sections 22.1.1 and 22.1.3 states IESO (not MPs) registering Reference Level and Reference Quantity data; therefore, there appears to be inconsistencies between these sections (as well as within the applicable Market Manual)
- Section 22.13.1 – same comments as above regarding thresholds potentially better placed within applicable Market Manuals
- Section 22.14.1 – based on questions asked during the August 26 webinar regarding Sections Appendix 7.1A and Appendix 7.2A that have not been included within MR-00455, IESO responded to questions via an email (September 27) to MPs and stakeholders stating that “These appendices will be the market rules that govern the day-ahead calculation engine and the pre-dispatch and real-time calculation engines and will be part of a future market rules amendment, in Q2 2022.” – this explanation is understandable and consistent with what has been conveyed to MPs, stakeholders, and TP previously; however, based on the purpose of this section, cross references to the applicable Market Manuals should be made regarding procedural steps IESO will take to administer the Conduct & Impact Test (i.e., not just the forthcoming inputs to the applicable calculation engines as referred to within IESO’s September 27 email)
- Sections 22.15.3, 22.15.4, 22.15.7, 22.15.10, 22.15.12, and 22.15.15 – regarding ex-post mitigation of potential physical withholding, same comment as above regarding thresholds potentially better placed within applicable Market Manuals

At this time, the Consortium has no comments regarding the MPM framework relating to the interties but may comment on this at an appropriate later date.

Chapter 3, Section 2.5 – Notice of Dispute, Negotiation and Response

- Section 2.5.1A.6 – this provision regarding MPs' ability to exercise disputes should not solely be referencing the Independent Review to determine Reference Levels and Reference Quantities – it should be cross referencing the entirety of the MPM framework as described in Section 22 regarding all circumstances to which MPs could dispute IESO determinations or resulting actions or outcomes (e.g., issuing settlement charges where IESO applies mitigation for physical withholding, etc.); overall, the entire dispute and notice of disagreement framework needs to be carefully reviewed to address needed enhancements to the governance, decision-making, and MP recourse framework relating to application and outcomes of the MPM framework and for the entirety of IAM considering the fundamental changes that will result from implementation of MRP

MR-00461-R01 – Market Power Mitigation: Batch 2 Definitions

- Broad Constrained Areas – assuming applicable rule amendments are added relating to BCAs, then BCAs need to be defined (similarly to NCAs and DCAs)
- RTM is italicized but it is not included within the present Market Rules within Chapter 11 (Definitions) nor included within MR-00461-R01 – this re-occurs throughout multiple sections within MR-00455
- Market Control Entity – for needed clarity, a specific definition should be described and not just cross reference Chapter 7, some of the details proposed in the draft Section 22.9 could be moved to the definition
- Notice of Disagreement – can MPs utilize a Notice of Disagreement for any charges levied by IESO resulting from the MPM framework (e.g., settlement charges resulting from mitigating physical withholding)? If so, this definition requires cross references to applicable sections relating to the MPM framework.

COMMENTS ON DRAFT AMENDMENTS TO MARKET MANUALS

Market Manual 14: Market Power Mitigation – Part 14.1: Market Power Mitigation Procedures

Chapter 2 – Designation of Constrained Areas

- BCAs should be added with applicable and sufficient details and information
- Section 2.1 – make explicit that PCAs will be published by IESO at least on an annual basis
- Section 2.1.1 – explicit details, data, and information should be listed within MM 14.1 and/or should be published on the IESO website for the following input data

- Congestion components of Locational Marginal Prices (LMPs) and congestion limits or thresholds towards determining PCAs
 - Sensitivity factors and generation shift factors (GSFs) of all applicable resources
 - All applicable operating security limits (OSLs)
 - Real-time five-minute historical binding data for transmission facilities and OSLs, outages, and GSFs for previous 365 days
 - List of expected material configuration changes to the IESO-Controlled Grid (ICG) relating to the subsequent 365 days on the congestion component of LMPs, sensitivity factors or GSFs and OSLs
- Section 2.1.2 – include examples of how IESO will methodologically determine PCAs
 - Section 2.2.1 – include engineering equations to determine NCAs with a more detailed example than what has been provided
 - Section 2.3.1 – regarding DCAs, same comment as within the above point (Section 2.2.1)

At this time, the Consortium has no comments regarding MPM framework relating to the interties but may comment on this at an appropriate later date.

Market Manual 14: Market Power Mitigation – Part 14.2: Reference Level and Reference Quantity Procedures

Chapter 2 – Overview of Reference Levels and Reference Quantities

- Section 2.1.2 – as specified in Section 2.1.1 and within the proposed draft rule amendments, default Reference Levels should be specified as an option regarding Non-Financial Dispatch Data parameters
 - Present experience between renewable generators and IESO towards determining Reference Levels suggests more work needs to be done to provide clarity of process and options relating to selection of default parameters (e.g., ramp rates for wind and solar generators)

Chapter 3 – Determining and Updating Reference Levels and Reference Quantities

As stated within points made above, consistency is needed regarding whether MPs or IESO have the obligation to input data and information regarding Reference Levels and Reference Quantities as part of the facility registration process. For example, p. 8 states that “During the registration procedures as described in Market Manual 1.5, a market participant must submit information to support requested

reference levels or reference quantities". This statement appears to contradict proposed draft rule amendments from MR-00455.

- Sections 3.1 and 3.2 – regarding forms of documentation MPs are required to submit to IESO to validate Reference Levels and Reference Quantities, original equipment manufacturer (OEM) data, information, and documentation may not always be accessible or still exist – this is proving to be the case for many hydroelectric generators that have been in operation for many decades; therefore, IESO must work with MPs towards more practical solutions where such OEM data, information, and documentation are not available simply due to the passage of time

Chapter 5 – Temporary Reference Level Change Requests

Regarding hydroelectric generators and energy storage facilities with energy limited supply attributes, this section should specify the ability of these resources to request temporary Reference Level changes. Ultimately, offer prices should be used to indicate when energy from energy limited resources should be committed, scheduled, and dispatched during real-time hours and intervals when this energy (or operating reserve) is most required.

Chapter 6 – Cost Components of Financial Dispatch Data Parameters

- Section 6.3.1 – building on points made under Chapter 3 above, the concept of the “expected design life of a resource” may not be extracted from OEM documentation considering such documentation may not exist due to the age of many hydroelectric generators; therefore, IESO must be amenable to working with these hydroelectric generators towards satisfactory solutions – further, it is noted that establishing a design life for many hydroelectric generators will require new studies (especially under the circumstance where original OEM documentation no longer exists) which will prolong timelines to finalize components (e.g., major maintenance costs, etc.) towards the finalization of facility-specific Reference Levels and will likely require lots of back and forth discussions with IESO
- Section 6.4 – hydroelectric generators are presently working with IESO to provide data and information regarding opportunity costs as part of establishing facility-specific Reference Levels, and to date while the workings with IESO have been constructive issues with the calculations of opportunity costs are still being worked through; therefore, the Consortium expects future changes will likely be required to ultimately reflect what will be decided once final Reference Levels have been decided
- Section 6.7 – regarding opportunity costs relating to operating reserve, more details are required in addition to these costs being “based on incremental costs associated with posturing a resource to be able to provide additional energy”

Chapter 7 – Reference Levels for Financial Dispatch Data Parameters

- Section 7.2 – regarding hydroelectric generation, the long-term average energy calculation used to determine Gross Revenue Charges (GRC) needs more clarity as it is not clear why 10 years of a data is required and whether this calculation includes spilled amounts; it is not clear why there a historical threshold of 5 years is used to determine unscheduled maintenance costs that can be included in financial offers; while hydroelectric generators can adjust historical costs by inflation, it is not clear what is an appropriate index if the Consumer Price Index (CPI) index is not used; hydroelectric generators may want greater flexibility to modify their costs to account for changing/changed operational profiles (even though an equivalent operating hours calculation is specified)

Chapter 8 – Reference Levels for Non-Financial Dispatch Data Parameters

- Section 8.3 – building on points made under Chapter 3 above, the ramp-rate calculation for hydroelectric generators requires OEM documentation, which may not be available due to the age of many hydroelectric generators and there is a similar request for maximum number of starts per day, and in both cases hydroelectric generators should be able to provide alternate solutions with IESO regarding use of, and type of, historical data
- Section 8.4.1 – regarding ramp rates for solar generators, “supporting documentation” should be defined with examples of acceptable documentation listed
- Section 8.5.1 – regarding ramp rates for wind generators, “supporting documentation” should be defined with examples of acceptable documentation listed
- Sections 8.7.1 and 8.7.2 – regarding ramp rates for energy storage facilities, “supporting documentation” should be defined with examples of acceptable documentation listed

Chapter 9 – Reference Quantities

- Section 9.2 – regarding hydroelectric generators, Reference Quantities are based on the minimum head capability for each generation unit for a particular resource, but it is not clear how that minimum head capability will be quantified and whether it will be adjusted on a seasonal basis

At this time, the Consortium has no comments regarding the associated amendments to MM 1.3 and MM 1.5.



The Consortium will be happy to discuss this submission with IESO at a mutually convenient time.

Sincerely,

A handwritten signature in black ink, appearing to read "J. Chee-Aloy", enclosed in a thin black rectangular border.

Jason Chee-Aloy
Managing Director
Power Advisory

cc:

Jessica Savage (IESO)
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Michelle Dueitt (ENGIE)
Julien Wu (Evolugen by Brookfield Renewable)
Stephen Somerville (H2O Power)
JJ Davis (Kruger Energy)
Deborah Langelaan (Liberty Power)
Jeff Hammond (Longyuan)
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